

Service Manual

General Description

Adjustment Procedures

Block / Schematic Diagrams

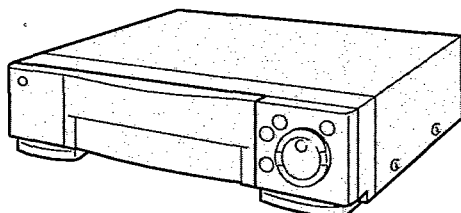
Exploded Views / Parts List

Video Cassette Recorder

Panasonic **VHS** VHS
PAL
625

Hi-Fi HQ

NV-HS950^B_{EC}



K-MECHANISM

SPECIFICATIONS

ITEM	SPECIFICATION		ITEM	SPECIFICATION
POWER	SOURCE: 220—240 V AC 50/60 Hz		AUDIO	INPUT: EURO AV (AV1, AV2) Connectors (21 pin) More than -6 dBV (500 mV), More than 10 k Ω AUDIO IN (AV3: FRONT/REAR) Connector (Phono type) More than -6 dBV (500 mV), More than 47 k Ω MICROPHONE JACK -70 dBV
	CONSUMPTION: 30 watts			
RECORDING SYSTEM	2 rotary heads, helical scanning system			
	PAL			
TV TUNER SYSTEM	NV-HS950B	UHF: CH21—CH69 (PAL I) 75 Ω terminated	AUDIO	OUTPUT: EURO AV (AV1, AV2) Connectors (21 pin) -6 dBV (500 mV), Less than 1 k Ω AUDIO OUT Connector (Phono type) -6 dBV (500 mV), Less than 1 k Ω HEADPHONE JACK -30 dBV, 8 Ω
	NV-HS950EC	VHF I : CH2—CH53 VHF II : CHM1—CHM9 VHF III : CHM10—CHU2 VHF H : CHU3—CHS41 (PAL/SECAM B) UHF: CH21—CH69 (PAL/SECAM G) 75 Ω terminated		
RF OUT SYSTEM	NV-HS95EC	UHF: CH21-CH69 (PAL/SECAM G) 71 $\pm$ 3dB μ , 75 Ω terminated	TAPE FORMAT	S-VHS, VHS Cassette tape (Tape width 12.7 mm)
	NV-HS950B	UHF: CH21-CH69 (PAL I) 71 $\pm$ 3dB μ , 75 Ω terminated	TAPE SPEED	SP: 23.39 mm/s LP: 11.695 mm/s Record/Playback Time: SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape FF/REW Time: 2.5 min. with 180 min. type tape
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L'-R' heads) 1 flying erase head	INPUT: EURO AV (AV1, AV2) Connectors (21 pin) 1.0 Vp-p, 75 Ω unbalanced S-VIDEO IN (AV3: FRONT/REAR) Connector 1.0 Vp-p, 75 Ω unbalanced VIDEO IN (AV3: FRONT/REAR) Connector (Phono type) 1.0 Vp-p, 75 Ω unbalanced		
			OPERATING HUMIDITY	35%—80%
	OUTPUT: EURO AV (AV1, AV2) Connectors (21 pin) 1.0 Vp-p, 75 Ω unbalanced S-VIDEO OUT Connector 1.0 Vp-p, 75 Ω unbalanced VIDEO OUT Connector (Phono type) 1.0 Vp-p, 75 Ω unbalanced	DIMENSIONS	430 (W)×107 (H)×356 (D) mm	
		WEIGHT	5.5 kg	
AUDIO	HEAD: 1 Stationary head (Normal-mono only) 2 channels (Hi-Fi Sound-Stereo)		STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller 1 pc. Stereo Audio Cable 1 pc. S-VIDEO 4P Cable 1 pc. Edit 5P Cable 1 pc. IR Cable 1 pc. Ferrite Core

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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Panasonic

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with technical know how for actual servicing and general information of features and controls, enabling you to become familiar with each function.

Section 2 presents to your mechanical and electrical adjustment information as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to the appropriate service manual.

Section 3 contains block diagrams which provides you with information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c. ...

Section 4 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

Note 1: Adjustment procedures, Disassembly Procedures and Assembly Procedures for Mechanism Chassis are separate volume from this service manual.

Please refer to the service manual for K-Mechanism Chassis. (Order No. VRD9307M131)

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SECTION 1 GENERAL DESCRIPTIONS

1-1. SERVICE INFORMATION

1-1-1. CHANNEL MEMORY IC INITIALIZATION

When replacing the memory IC6702, its IC should be initialized.

Note:1) It should be performed before tuning.

2) Meaning of "INITIALIZATION" is to make dependency in different models and to distinguish between different features.

How to set the Model Code.

Key operation	FIP Display	TV Monitor
Press the FF and EJECT keys.	0 00 0	None
Press the FF and EJECT keys in twice.	2 00 00	None
Press the EJECT keys for 3 seconds.	2 00	None
Press the CH UP key in twice.	2 2 00	None
Press the Power key.	2 2:00 ↑ flashing	Service Mode (See Fig. S2)
Set the Model Code by using 10-key on the Remote Controller Unit. (See Fig. S1)	2 2:00 ↑ flashing	Service Mode (See Fig. S2)
(For cancell) Press the Power key.	2 2 00	None
Press the FF and EJECT key several times until normal display.	10:00	None

Model	Code No.
NV-HS950B	169
NV-HS950EC	165

Fig. S1 Model Code

Service	
Version: OSD	BAAA0.43
TIMER	V6AJ2. 06
Pos for time reference:	NONE
Last error code:	01
Model code:	161
Clock adjust:	+ 0
VPS/PDC default:	ON depend

Fig. S2 Sample of Service Mode OSD

Caution:

Since the "Clock adjust" and "VPS/PDC default" are future expansion, do not change the initial setting.

1-1-2. SERVICE POSITION

A. CHECKING OF MAIN C.B.A.

When servicing the MAIN C.B.A., take out the MAIN C.B.A. and mechanism from the frame and turn over.

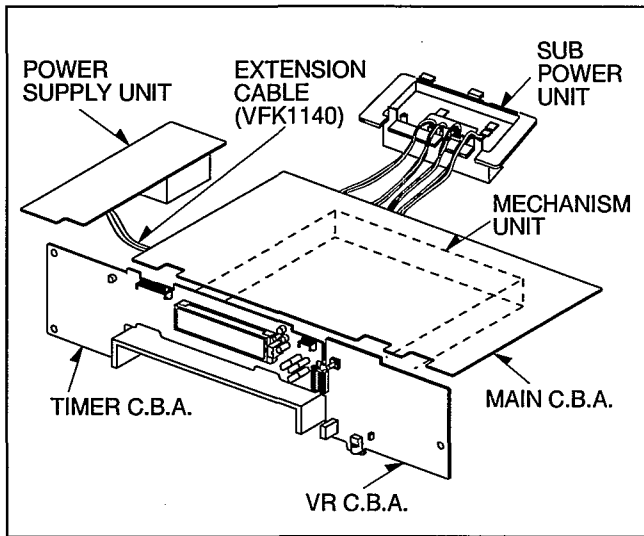


Fig. S3

B. MECHANISM SERVICE POSITION

When servicing the K-Mechanism, take out the mechanism from the MAIN C.B.A. and connect Extension Cable (VFK0889) between the loading-motor connector and P2001 as shown below.

In this position, the following services are possible.

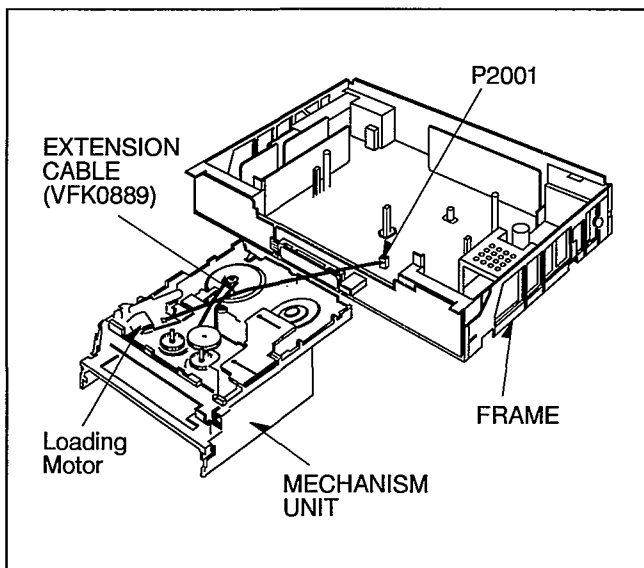


Fig. S4

B-1. CHECKING OF LOADING/UNLOADING OPERATION

There are 3 methods for manual operation of loading/unloading operation as follows.

1. HAND OPERATION

- 1) Turn the Worm Gear or the Worm Wheel Gear (Remove the Loading Motor Unit) manually.

2. BATTERY OPERATION

- 1) Remove the Extension Cable (VFK0889).
- 2) Connect the Battery (Manganese-Type R6 (AA) 3pcs./+4.5V) to the Loading Motor terminals.

3. SERVICE INFORMATION DISPLAY OPERATION

- 1) Set the Service Information Display mode.
Turn the Shuttle Ring to FF then push the EJECT button.
- 2) Turn the Shuttle Ring to FF then push the EJECT button 7 times to set the Service Mode 7. (The end of display on the Display becomes "-").
- 3) In the above Service Information Display mode, the Loading Motor rotates for Loading operation when the "PLAY" button is pressed.
The Loading Motor rotates for unloading operation when the "STOP" button is pressed.

Remark:

Use the "SERVICE INFORMATION DISPLAY" mode for a final check of mechanism movement.

B-2. CHECKING OF REEL GEARS OPERATION

- 1) Move the mechanism to "PLAY" position by loading operation. (Refer to B-1)
- 2) Turn the Capstan Rotor Unit to check movement of reel gears.

1-1-3. UPPER CYLINDER DISASSEMBLY

- 1) Remove the Top Panel.
- 2) Remove the screw (A) and Earth Plate.
- 3) Move the lock pinch to the left side in order to release the cylinder lock.
- 4) Keep turning the Upper cylinder clockwise and counterclockwise alternately and remove the Upper cylinder.

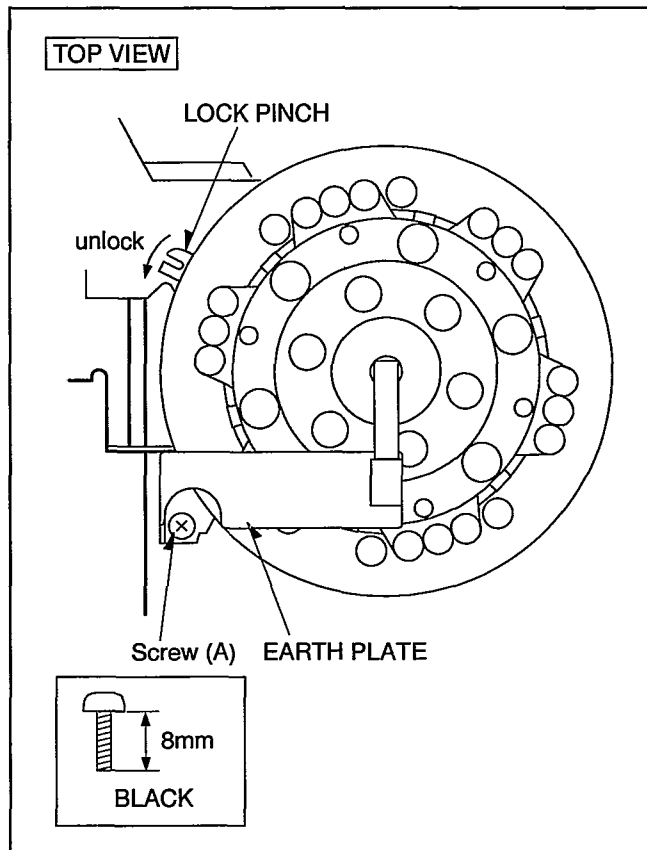


Fig. S5

1-1-4. UPPER CYLINDER ASSEMBLY

- 1) When mount the Upper cylinder, the lock of it has to be released. Keep turning Upper cylinder clockwise and counterclockwise alternately and keep pressing it until it is mounted completely.
- 2) Move the lock pinch to right side in order to fix the Upper cylinder after the Upper cylinder has been mounted.

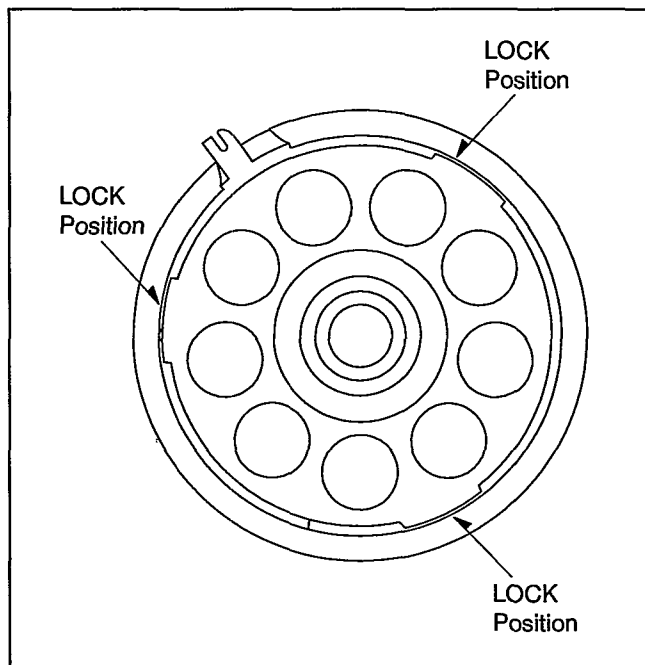


Fig. S6

1-1-5. CYLINDER UNIT REPLACEMENT

A. CYLINDER UNIT REPLACEMENT

- 1) Remove the 3 Screws (B) of the CYLINDER UNIT with a magnetized screw driver in the MECHANISM SERVICE POSITION.

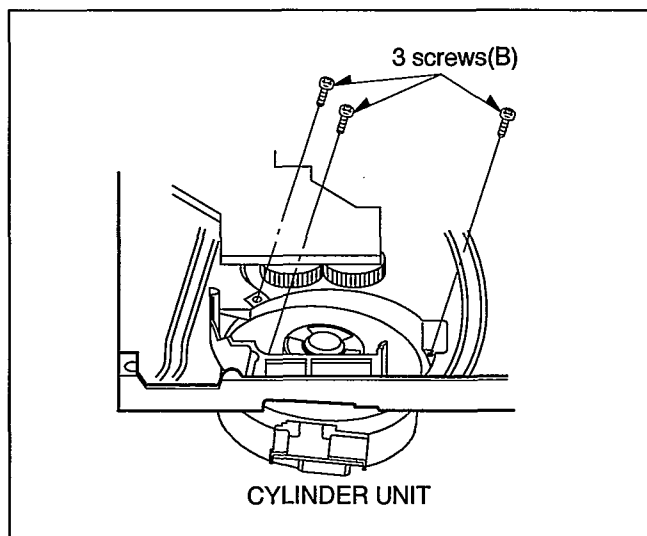


Fig. S7

1-1-6. FLAT CARD CABLE INSTLLATION

When installing the Flat Card Cable on the connector, install the Flat Card Cable with the cable contacts facing the connector contacts.

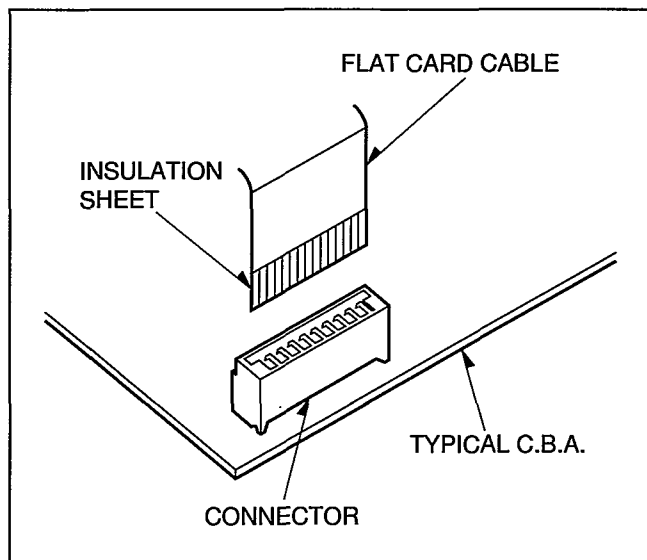


Fig. S8

1-1-7. CAPSTAN STATOR UNIT ASSEMBLY

When replacing the Capstan Stator Unit, the Centre Fixing Tool (VFK0851) must be used to fix the centre of Capstan Stator Unit.

Method:

- 1) Place the Capstan Stator Unit into position.
- 2) Loosely tighten the 3 screws.
- 3) Insert the Centre Fixing Tool (VFK0851) as shown below.
- 4) Tighten the 3 screws.
- 5) Remove the Centre Fixing Tool.

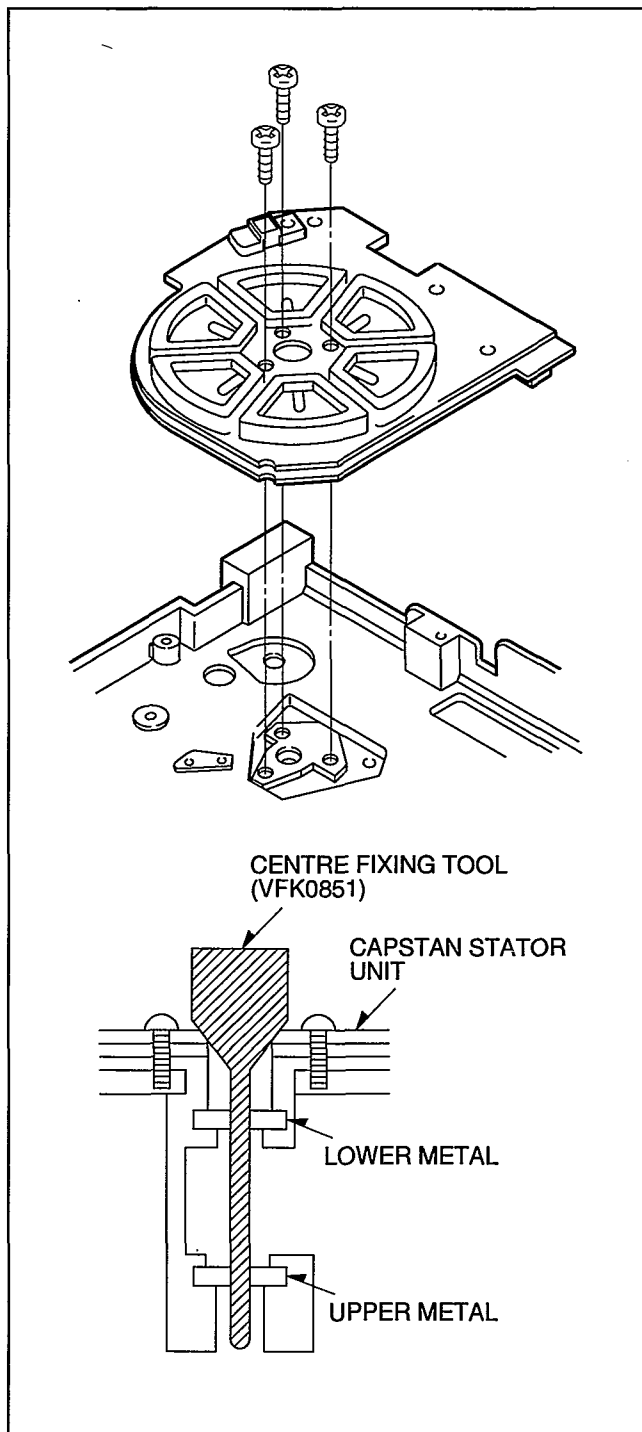


Fig. S9

1-1-8. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>

If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear and will not rotate.

To perform the Eject operation with the cassette carriage not installed, it is necessary to rotate the carriage connection gear by hand in the direction of the arrow.

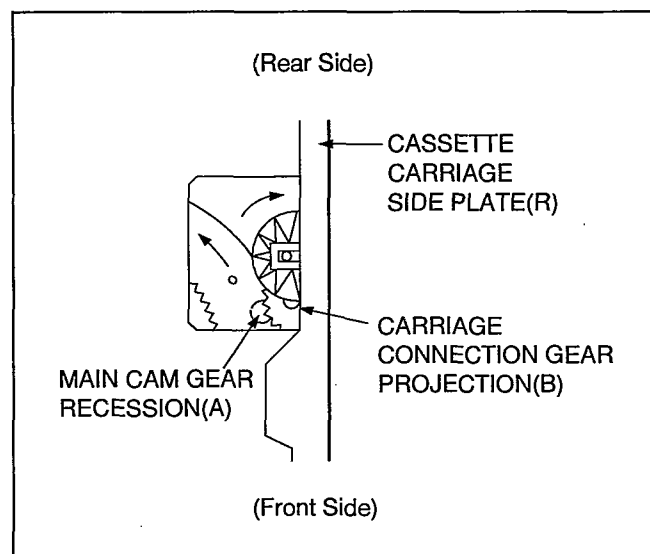


Fig. S10 Top View of Eject Operation

1-1-9. TAKE-UP PHOTO SENSOR OPERATION

Note the following matters for Take-up Photo Sensor Operation.

- 1) While servicing of the K-Mechanism, the unit will not operate properly if a strong light (ex, Fluorescent light, Spot light) falls on the Take-up Photo Sensor. In this case, cover the Take-up Photo Sensor to prevent the light from falling on it.
- 2) While servicing of the K-Mechanism with "Power On" and without cassette tape inserted, the Unit does not operate properly.

1-1-10. REMOVAL OF THE CASSETTE TAPE

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually. There are 2 methods of removing the cassette.

1. HAND OPERATION

- 1) Take out the mechanism from MAIN C.B.A.
- 2) Turn the Worm Gear manually, moving the Loading Post to the unloaded position.
- 3) Turn the Capstan Rotor Unit clockwise to take up the tape.
- 4) Turn the Worm Gear again to eject the cassette.

2. BATTERY OPERATION

- 1) Take out the mechanism from Main C.B.A.
- 2) Connect the Battery (Manganese-Type R6 (AA) 3pcs./ +4.5V) to the Loading Motor terminals as shown below.
- 3) After moving the Loading Post to the unloaded position, disconnect the battery to stop the motor.
- 4) Turn the Capstan Rotor Unit to clockwise to take up the tape.
- 5) Reconnect the battery to eject the cassette.

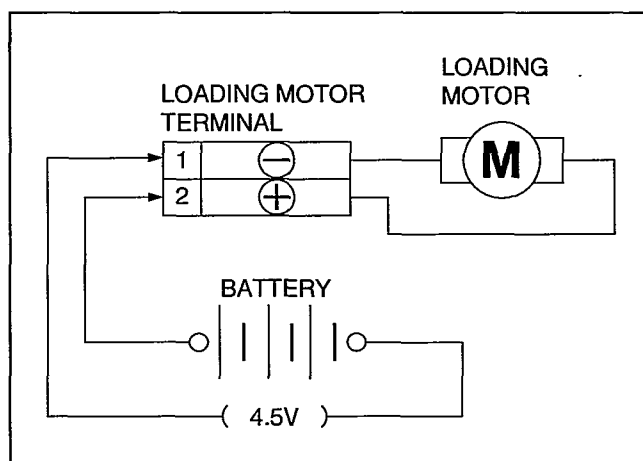


Fig. S11

If the cassette tape can not be removed by the above 2 methods, remove it by the following method.

- 1) Remove the Top Panel.
- 2) Remove the Front Panel Unit.
- 3) Lift up the Pinch Arm after removing spring.
- 4) Push the P5 Arm and remove the cassette tape from tape transportation (P1, P2, P3 and P5 Posts).
- 5) Turn the Capstan Rotor Unit to take up the tape.
- 6) Remove 1 screw from the Side Plate (R) Unit to disconnect the Rack Gear from the Carriage Connection Gear.
- 7) Take out the cassette tape from the Cassette Compartment.

1-2. SELF-TEST INDICATION DISPLAY

This VTR has a self-diagnosis and display function. If the VTR detects trouble during installation or during use, one of the following Fault Indication Codes will automatically appear in the VTR display. Fault Indication codes are displayed in the form of a single English letter followed by two numbers, as for example "H01".

- Note: 1. The indication "U" is displayed on the FIP while power remains on.
 2. Otherwise, the indication "H" or "F" is displayed on the FIP, and the power is automatically turned off. When the power is turned on again, the Fault Indication Code will disappear and the unit will return to normal display mode (either clock or counter).

3. This Fault Indication Code will be stored in the Timer microprocessor even with the AC plug disconnected.

The two-digit number portion of the stored Fault Indication Code can be redisplayed in the FIP's "second" display position (the last 2 digits on the light) by placing the unit in Service Mode Number 2 when turning on Service Information Display as for example "01" or "02" etc.

If a second error occurs, only the most recent error will be displayed and stored.

4. To erase the stored Fault Indication Code data. Turn the Shuttle Ring to FF then push the EJECT button for 5 seconds.

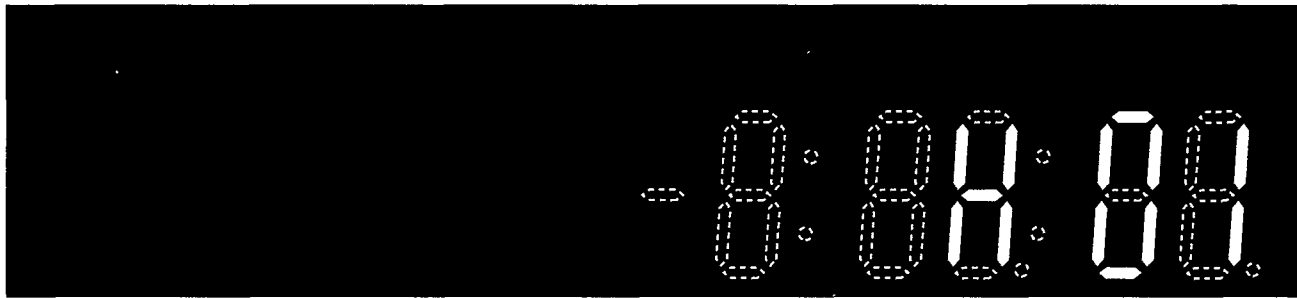
<FIP>		
		
INDICATION	CAUSE	REMEDY/CHECK
U 10	Dew formation.	Wait until the indication disappears.
H 01	After cylinder lock is detected, the cylinder does not start rotating again even after tape unloading.	Check the cylinder-motor drive circuit.
H 02	Cassette tape is not wound up during tape unloading except Eject mode.	Check the capstan-motor drive circuit.
F 03	Mechanism locks during mode transition except Eject mode.	1. Check the loading-motor drive circuit. 2. Check the mechanism phase alignment. 3. Check the Mode Switch.
F 04	Mechanism locks during tape unloading.	1. Check the loading-motor drive circuit. 2. Check the mechanism phase alignment.
F 05	Cassette tape is not wound up during tape unloading in Eject mode.	1. Check the capstan-motor drive circuit. 2. Check the Supply/Take-up reel pulse.
F 06	Mechanism locks after tape unloading in Eject mode.	1. Check the loading-motor drive circuit. 2. Check the mechanism phase alignment for Cassette Holder Unit.
F 07	Rec power voltage does not appear in Rec mode.	Check the Rec power supply circuit.
F 08	Rec power voltage appears except Rec mode.	Check the Rec power supply circuit.
F 09	No serial clock transmission between IC6001 and IC7501.	Check the serial clock circuit.

Fig. T1 Self-Test Indication Display

1-3. SERVICE INFORMATION DISPLAY

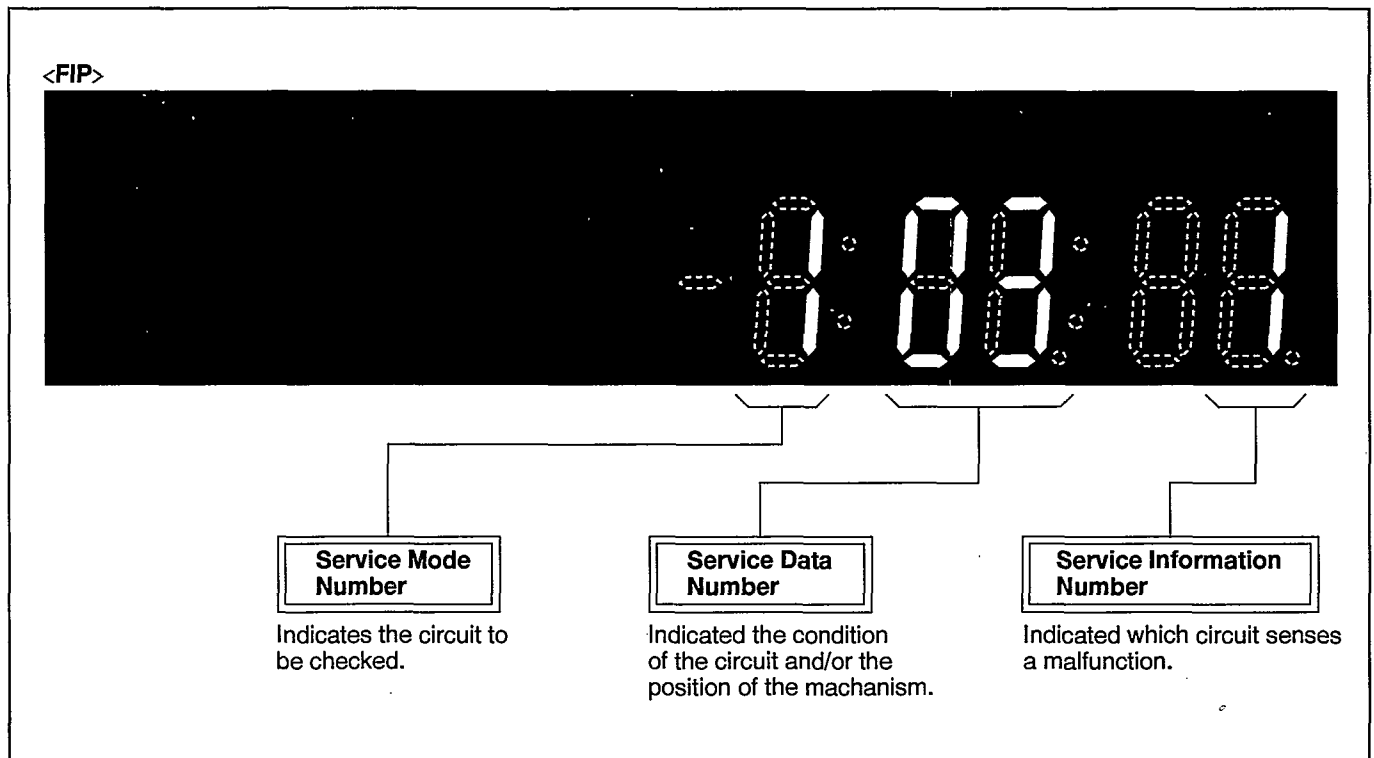


Fig. D1 Service Information Display

1-3-1. Purpose of Service Information Display

This information aids trouble shooting by indicating the source of the malfunction. The service mode number & service data number are used by the technician during repair while the service information can be used by the consumer to diagnose malfunctions allowing the technician to provide a more accurate repair cost estimate and reduce repair time.

1-3-2. Turning on Service Information Display

- (1) Turn the Shuttle Ring to FF then push the EJECT button to set the Service Mode.

In the Service Information Display, there are four digits divided into 3 functions.

The first digit indicates which of the 7 service modes that the unit is currently in.

- MODE 1 : Checks tape protection circuit
- MODE 2 : Checks tape transport mechanism
- MODE 3 : Checks mode switching operation
- MODE 4 : Checks control buttons
- MODE 5 : Checks capstan motor
- MODE 6 : Checks cylinder motor
- MODE 7 : Checks loading/unloading operation

The second and third digits are service data which indicate the condition of the circuit or mechanism being checked.

The forth digit is the service Information display. It is to be used by the consumer to help determine the source of a malfunction. The service information display operates independently of the service modes and stores the fault indication in memory for as long as AC power is not supplied.

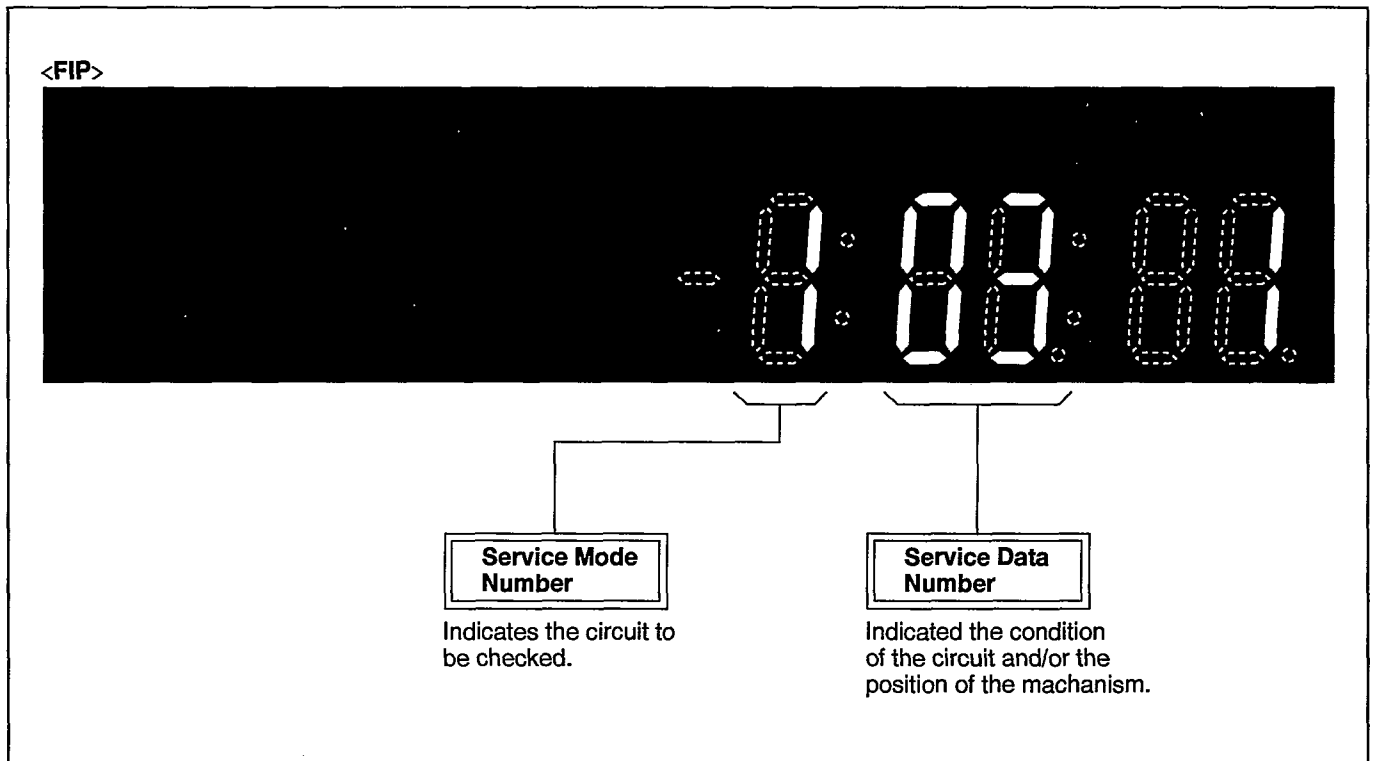


Fig. D2 Service Mode Number and Service Data Number on S.I.D.

- (1) Turn on Service Information Display.
- (2) To change Service Modes turn the Shuttle Ring to FF then push the EJECT button.
- (3) Mode 1: Checks the Sensor LED, Supply & Take-up Sensor circuits check the circuits by blocking the light from the Sensor LED to either or both Supply & Take-up Sensors. When the light is blocked to both sensors, "00" should be indicated on the service data number. When the light is blocked to the supply sensor, "01" should be indicated.
- (4) Mode 2: Checks the mode switch circuit while indicating mechanism position. Service Data Numbers indicate the position of the mode switch and there by the mechanism position.
- (5) Mode 3: Checks that mode switch circuit operations have been completed. Service Data Number should indicate "00" after each mechanism operation is completed.
- (6) Mode 4: Checks the operation circuit. Indicates if IC6001 receives the operating commands from the mode buttons and/or remote controller.

- (7) Mode 5: Checks the capstan motor circuit. Indicates if the IC6001 has received the command to rotate the capstan motor.
- (8) Mode 6: Checks the cylinder motor circuit. IC6001 has received the command to rotate the cylinder motor.
- (9) Mode 7: Checks the Loading/Unloading Operation. The Loading Motor rotates for loading operation when the "PLAY" button is pressed. The Loading Motor rotates for unloading operation when the "STOP" button is pressed. This mode can be displayed indefinitely until the OPERATE button is pressed.

<NOTE>

Refer to Fig. D5 for details of Service Data Numbers.

1-3-4. Service Information Number

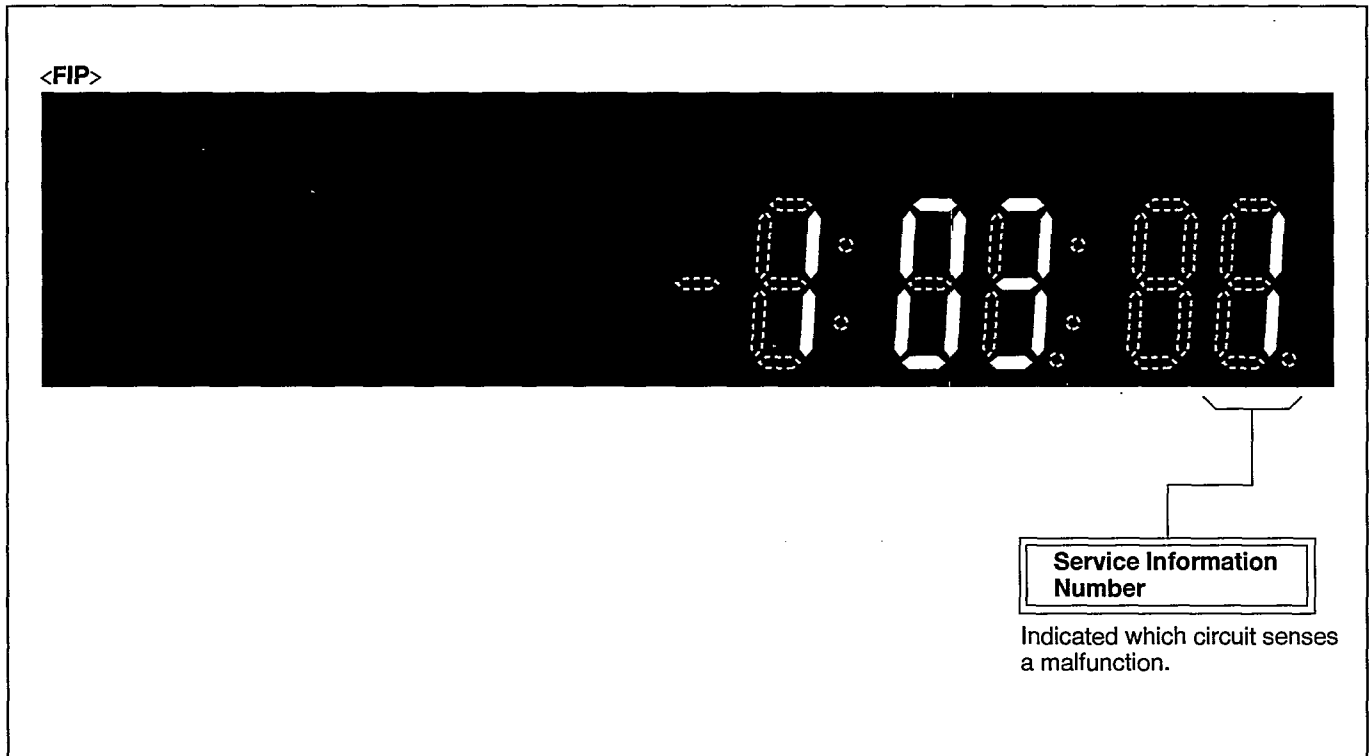


Fig. D3 Service Information Number on S.I.D.

Refer to Fig. D4 for details of Service Information Number.

Note:

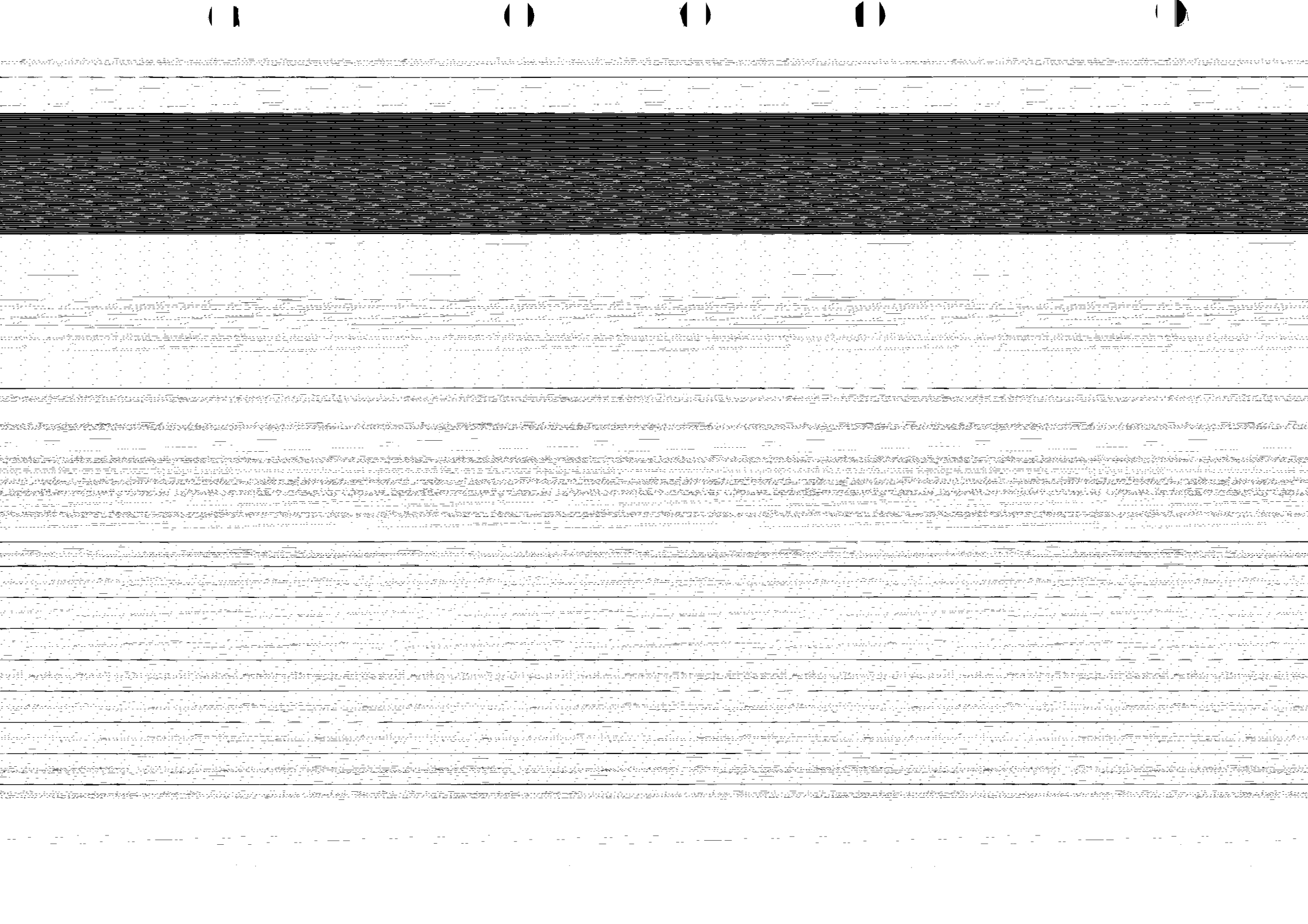
The Service Information Number display is independent of the service mode display.

The Service Information Number will be stored as long as AC power is not supplied. (It can be displayed in the Service Mode 2.)

If a second error occurs, only the most recent error will be displayed.

Service Information Number	Malfunction
0	Normal (No problem)
1	Cylinder stop
2	Tape reel stop
3	Stop at position other than 4 or 6
4	Stop during unloading
5	Faulty capstan rotation
6	Stop during Cassette-In/Eject operation

Fig. D4 Detail Service Information Numbers



1-3-5. Timing Chart from Mode SW to System control
IC6001

System control IC6001 senses the mechanism position through the Mode SW.
Fig. D6 shows the timing for Service Mode Number 2.

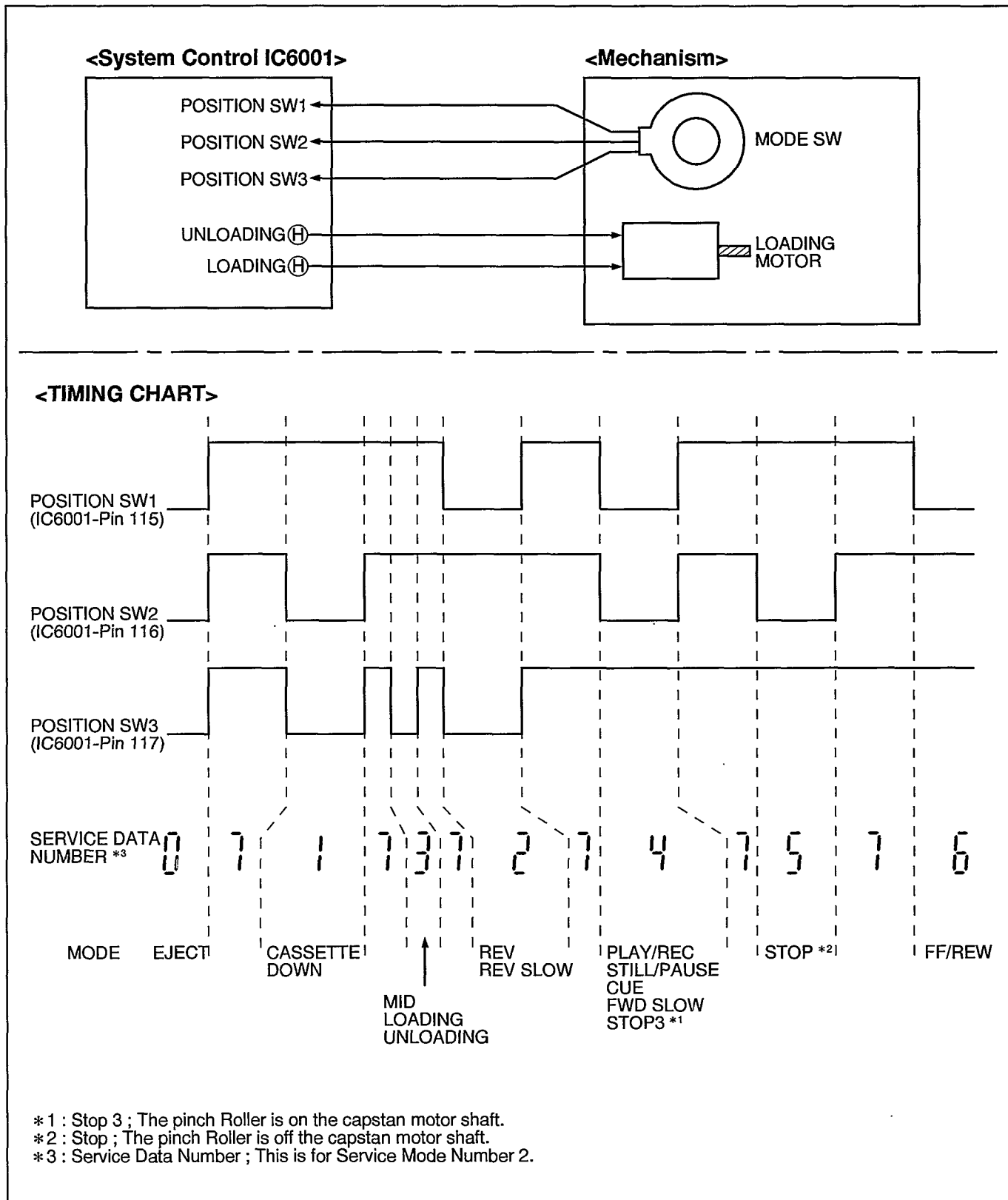
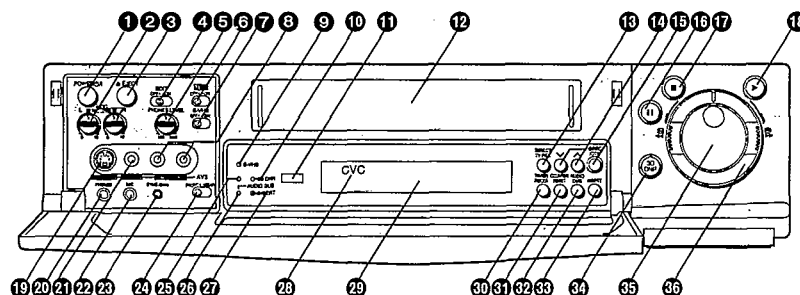


Fig. D6 Timing Chart of Mode SW

Controls and Connection Sockets

This gives a detailed explanation of the function of each button, switch and connection socket.



1 POWER ϕ /I (VCR ϕ)

Press to switch the VCR from on to standby mode or vice versa. In standby mode, the VCR is still connected to the mains.

2 AUDIO REC LEVEL

To adjust the recording level to peak at +4 dB on the recording level indicator.

3 EJECT

To eject a video cassette.

4 EDIT

OFF: For normal use of the VCR.
ON: Select this position when editing. The picture quality is set to a status which is suited to editing.
•The 3D DNR function ceases to work.
•The TBC does not function during slow playback or still-picture playback.
•This must be set to ON when performing editing operations using the VITC code.

5 PHONES LEVEL

For adjusting the volume level of connected stereo headphones.

6 TBC

When the tape in the cassette is loose or damaged, or when the tape movement is unstable during recording or playback, the playback picture may shake from side to side and the picture may become distorted. In this case, activate the Time Base Corrector by setting the TBC Switch to ON, and the picture will become stable and the shaking will be minimized.

•For normal use, set the TBC Switch to OFF.
•During playback, the picture may shake vertically or horizontally. In such a case, set the TBC Switch to OFF.
•This function will not work during NTSC playback.

7 S-VHS

When recording on an S-VHS cassette tape, select the desired recording format with this switch.

ON: The recording will be made in the S-VHS format.

•The S-VHS indicator lights up.

OFF: The recording will be made in the VHS format.

•The S-VHS indicator does not light up.

(It is possible to make a recording on an S-VHS cassette tape in the VHS format, for example, in order to play back the tape on another VHS VCR.)

•When using VHS cassettes, the recording is made in the VHS format irrespective of the position to which this switch is set.

•When a tape which was recorded in the S-VHS format is played back on a conventional VHS VCR, it is not possible to obtain playback picture.

8 AUDIO IN (AV3)

To connect the audio cable to a movie camera or to another VCR.

9 S-VHS Indicator

Lights up when the S-VHS format.

10 3D DNR Indicator

When the 3D DNR function is on, this indicator is lit.

11 Infra-red Remote Control Receiver Window

Insert a video cassette here.

12 Cassette Compartment

For the Direct TV REC function.

14 $\vee$ $\wedge$

To select the required programme position (TV station).

These buttons can also be used for tracking adjustment and vertical locking adjustment. See page 9.

15 REC/OTR

To start a recording.
For One-Touch Recording (OTR).

16 II (PAUSE/STILL)

In the stop mode: Still picture (Jog/Shuttle mode).

During playback:

•By pressing: Still picture. "II" is lit. (Jog/Shuttle mode).

During recording: Interrupts recording.

17 ■ (STOP)

To stop any playback or recording.

18 ► (PLAY)

To start playback. "►" is lit.

For the repeat playback function.

19 S-VIDEO IN (AV3)

To connect the S-Video cable to a movie camera or to another VCR that has a S-Video output socket.

•If an S-Video cable is connected, other video input (AV3) is automatically switched off.

20 PHONES

To connect stereo headphones.

21 VIDEO IN (AV3)

To connect the video cable to a movie camera or to another VCR.

22 MIC

To connect a microphone for recording. Once connected, this socket has priority.

23 SYNC/8 mm

To connect the synchro connection cord (VW-K10E/ VW-K1E) to a movie camera or another VCR equipped with synchronized editing capability. To connect a movie camera or another VCR equipped with LANC socket for One-Touch-Editing.

24 AV3 Selector

When Recording via the AV3 sockets on the front panel or rear panel, set this switch to FRONT or REAR.

25 Standby Indicator

This indicator is lit when the VCR is turned off or the VCR is timer recording standby mode.

26 AUDIO DUB Indicator

This indicator is lit when the audio dubbing is performed.

27 INSERT Indicator

This indicator is lit when the insert editing is performed.

28 CVC Indicator

This indicator is lit when the power is ON.

29 Display

30 TIMER REC

To turn the timer recording function on and off. $\square$ is lit or not lit.

Once operating timer recording function, the normal VCR operation is not possible unless this button is set to off.

31 COUNTER RESET

To reset the tape counter (elapsed time) to "0:00.00".

•The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

32 AUDIO DUB

To set up the VCR for audio dubbing.

33 INSERT

To set up the VCR for insert editing.

34 3D DNR

ON: Using the 3D DNR function, playback is performed in the state which achieves optimum picture quality in light of characteristics of a tape.

•The 3D DNR Indicator is lit.

•This control should normally be left in the ON position.

•The 3D DNR function does not work during NTSC playback.

OFF: Turn off the 3D DNR function.

•The 3D DNR indicator is not lit.

35 Jog Dial

To locate any desired frame with utmost precision.

36 Shuttle Ring

In the stop mode: To rewind or fast forward the tape. In the playback mode:

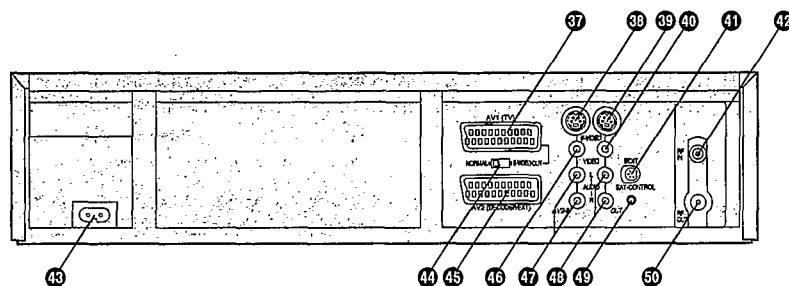
To search picture backward or forward.

In the still playback mode:

To adjust playback speed backward or forward.

In the rewind or fast forward mode:

To obtain high speed picture.

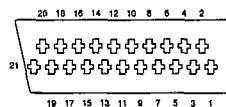


37 AV1 (TV)

This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.

This is also called Scart

Peritel
Euro Connector
Euro AV



NORMAL (AV1/AV2)	S-VIDEO (AV1)
1 AUDIO OUTPUT CH2 (R)	1 AUDIO OUTPUT CH2 (R)
2 AUDIO INPUT CH2 (R)	2 AUDIO INPUT CH2 (R)
3 AUDIO OUTPUT CH1 (L)	3 AUDIO OUTPUT CH1 (L)
4 AUDIO GND	4 AUDIO GND
5 BLUE GND	5 No connection
6 AUDIO INPUT CH1 (L)	6 AUDIO INPUT CH1 (L)
7 BLUE	7 No connection
8 SWITCHING VOLTAGE	8 SWITCHING VOLTAGE
9 GREEN GND	9 No connection
10 Control (AV1 only)	10 Control
11 GREEN	11 No connection
12 No connection	12 No connection
13 RED GND	13 C OUT GND
14 BLANKING GND	14 No connection
15 RED	15 C OUT
16 BLANKING	16 No connection
17 VIDEO OUTPUT GND	17 Y OUT GND
18 VIDEO INPUT GND	18 VIDEO INPUT GND
19 VIDEO OUTPUT	19 Y OUT
20 VIDEO INPUT	20 VIDEO INPUT
21 GND	21 GND

Caution: RGB reservation for only E/E operation when connecting the Pay TV decoder

38 S-VIDEO IN (AV3)

To connect the S-Video cable to a movie camera or to another VCR that has a S-Video output socket.

● If an S-Video cable is connected, other video input (AV3) is automatically switched off.

39 S-VIDEO OUT

To connect the S-Video cable to a TV or another VCR that has a S-Video input socket.

40 VIDEO OUT

To connect the video cable to a TV or another VCR.

41 EDIT

By connecting the optional Editing Controller (VW-EC310E/VW-EC300E) to this socket, such editing functions as Assemble Editing, Insert Editing and Audio Dubbing can be performed more quickly and efficiently between two VCRs or between a VCR and a movie camera.

To connect the supplied Edit cable to a movie camera or to another VCR for One-Touch-Editing.

42 RF IN

To connect to the external aerial.

43 AC IN~

To connect to the main power supply.

44 NORMAL/S-VIDEO OUT

NORMAL: Normally set to this position.

S-VIDEO OUT (AV1):

Set to this position when connecting the VTR to a TV set equipped with 21-pin Euro-AV Connector with pins for separate Y/C signal Input.

45 AV2 (DECODER/EXT)

To connect to a decoder, another VCR or a satellite receiver.

46 VIDEO IN (AV3)

To connect the video cable to a movie camera or to another VCR.

47 AUDIO IN (AV3)

To connect the audio cable to a movie camera or to another VCR.

48 AUDIO OUT

To connect the audio cable to a stereo audio system.

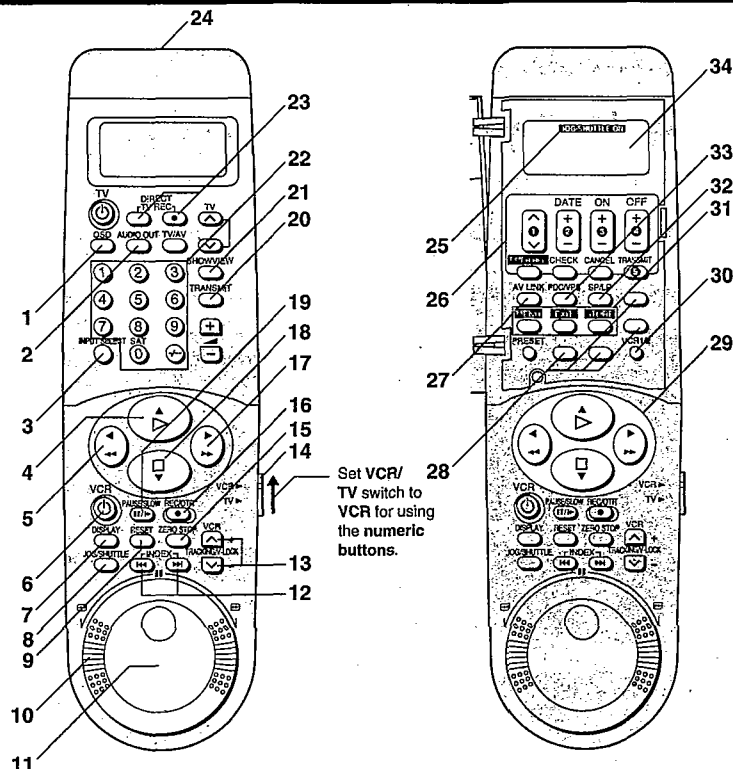
49 SAT CONTROL

To connect the supplied IR cable for satellite receiver control function.

50 RF OUT

To connect to the aerial terminal on a TV set.

Infra-red Remote Controller



VCR OPERATION

- 1 OSD**
For the On Screen Display function.
- 2 AUDIO OUT**
To select the desired sound mode.
At the every push of this button, the audio output mode changes as follows.
Stereo → Left → Right → Normal audio track
The Left (L) and Right (R) Indicators shown which sound mode is selected in the following way.
Stereo: Both the L and R Indicators appear.
Left: The L Indicator appears.
Right: The R Indicator appears.
Normal: Both the L and R Indicators don't appear.
- 3 INPUT SELECT**
To select the A1, A2 or A3 external recording source.
- 4 ▷ (PLAY)**
To start playback. "▷" is lit.
For the repeat playback function.

- 5 ◀◀ (REWIND)**
In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture. "◀◀" is lit.
- 6 VCR**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still connected to the mains.
- 7 DISPLAY**
To change the indication on the VCR Display or On Screen Display.
Clock → Counter → Remaining Tape Time
- 8 JOG/SHUTTLE**
Press this to switch to the Jog/Shuttle mode and cause JOG/SHUTTLE ON to appear on the remote controller display. Press again to make JOG/SHUTTLE ON disappear.
In the stop mode: Still picture (Jog/Shuttle mode).
During playback: Still picture (Jog/Shuttle mode).

- 9 RESET**
To reset the tape counter (elapsed time) to "0:00.00".
•The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.
- 10 Shuttle Ring**
Operate after pressing the JOG/SHUTTLE button to switch to the Jog/Shuttle mode.
To adjust playback speed backward or forward.
- 11 Jog Dial**
Operate after pressing the JOG/SHUTTLE button to switch to the Jog/Shuttle mode.
To locate any desired frame with utmost precision.
- 12 INDEX**
For the index search function.
- 13 ∇ ∆ (VCR), TRACKING/V-LOCK +/-**
To select the required programme position (TV station).
For tracking adjustment and vertical locking adjustment
•For manual tracking adjustment
The - and + buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by automatic digital tracking control.
•For slow tracking adjustment
When noise bars appear during still or slow playback, switch over to slow playback and adjust with the - or + button to reduce the noise bars.
•For vertical locking adjustment
Use the - and + buttons to minimize any vertical jitter during still picture playback.
Adjustment is not possible when the TBC is working.
- 14 VCR/TV switch**
VCR: Selects the VCR operation mode.
TV: Selects the TV operation mode.
- 15 ZERO STOP**
For the zero stop function.
- 16 REC/OTR**
To start a recording.
For One Touch Recording.
- 17 ▶▶ (FAST FORWARD)**
In the stop mode: To fast forward the tape.
In the playback mode: To search forward.
In the fast forward mode: To obtain high speed picture.
"▶▶" is lit.
- 18 □ (STOP)**
To stop any playback or recording.
- 19 PAUSE/SLOW (||/1/2▶)**
During playback:
•By pressing: Still picture. "||" is lit.
•By pressing for 2 seconds or more: Slow playback. "1/2▶" is lit.
During recording: Interrupts recording.

- 20 TRANSMIT**
To transmit the data that has been set on the remote controller to the VCR.
- 21 SHOWVIEW**
For the ShowView programming.
- 22 Numeric Buttons**
To select VCR on the VCR/TV switch.
•To select the programme positions (1-99) of the VCR.
9: ⑨
19: ① - ⑨
•To select the satellite programme positions (SAT1-SAT99)
SAT 9: ⑨ - ⑨
SAT 19: ① - ⑨
•To programme a ShowView number.
- 23 DIRECT TV REC**
For the Direct TV REC function.
Press both buttons at the same time.
- 24 Infra-red Transmitter**
The programming data are transmitted from here to the VCR.
- 25 JOG/SHUTTLE ON display**
While this display is lit, the unit is set to the Jog/Shuttle mode.
•Check that the display is lit before proceeding with a jog or shuttle operation.
•The display is automatically turned off if no operation is performed.
- 26 Timer Recording Operation Buttons**
∇ ∆, DATE, ON, OFF
To programme a timer recording.
TIMER REC:
To turn the timer recording function on and off.
[] is lit or not lit.
Once operating timer recording function, the normal VCR operation is not possible unless this button is set to off.
CHECK:
To check timer programmes.
CANCEL:
To cancel the settings made for a timer recording.
TRANSMIT:
To transmit the data that has been set on the remote controller to the VCR.
- 27 AV LINK**
To select the VCR mode or TV mode for AV LINK.
- 28 No function**

29 ▲▼◀▶:

To make selections from On Screen Display.
 •These buttons can also be used for playback, stop, rewind and fast forward mode.

30 VCR 1/2

To select the remote control mode. The selected mode appears on the remote controller display.

VCR 1: Set to this position on both the VCR and remote controller for normal use with one VCR.

VCR 2: Set to this position when using two Panasonic VCRs.

31 On Screen Display Menu Operation Buttons

The buttons written by green characters are used for the on screen display menu operation.

MENU: To make On Screen Display Main Menu appear on the TV screen.

EXIT: To exit the menu.

STORE: To confirm the selection, or to store.

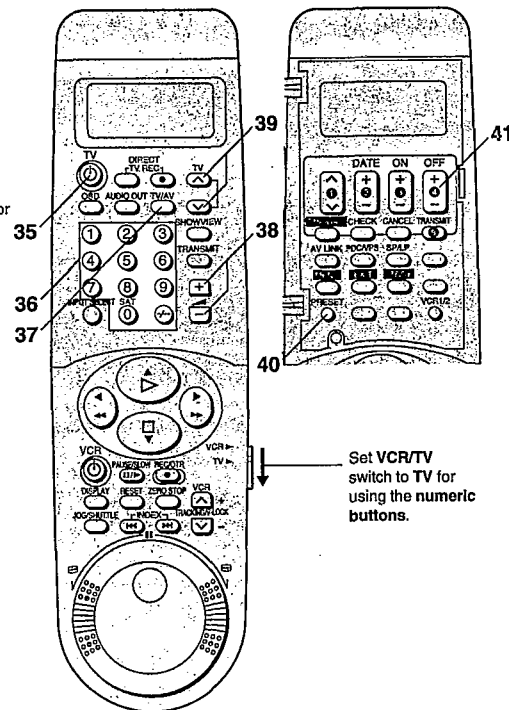
32 SP/LP

To select the tape speed desired for recording. SP gives the best picture quality. LP gives the longest recording time.

33 PDC/VPS

To set the PDC/VPS recording.

34 Display



Set VCR/TV switch to TV for using the numeric buttons.

TV OPERATION

Refer to page 51.

35 POWER (TV)

To switch the TV from on to standby mode or vice versa. In standby mode, the TV is still connected to the mains.

•With some TV models, it may only be possible to switch the TV to standby mode using this button. In this case, use TV/AV or V (TV) to switch the TV on.

36 Numeric Buttons

Selects programme positions (1-99) of the TV. Ensure that VCR/TV switch is set to TV.

37 TV/AV

To select the TV input.

38

Adjusts the volume of the TV.

39 V (TV)

To select the required programme position (TV station) of the TV.

40 PRESET

To set the remote controller for operation of the TV.

41 OFF

Sets the remote controller for operation of the TV.

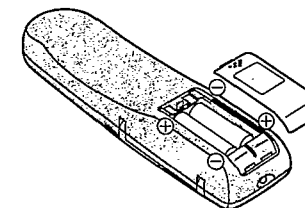
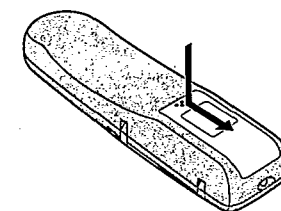
Power Source for the Remote Controller

The remote controller is powered by 2 "AA", "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

Precautions for Battery Replacement

- Load the new batteries with their polarity (+ and -) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Installing the Batteries



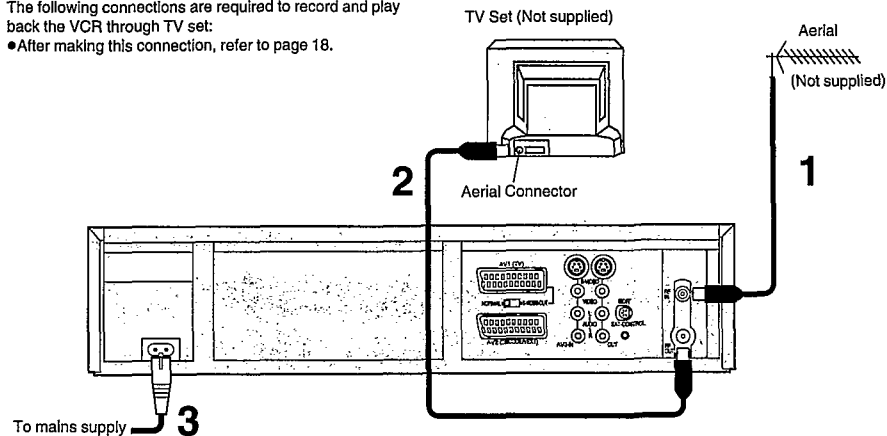
Connections

This tells you how to connect with an aerial, TV, etc.

Basic Connections

The following connections are required to record and play back the VCR through TV set:

- After making this connection, refer to page 18.

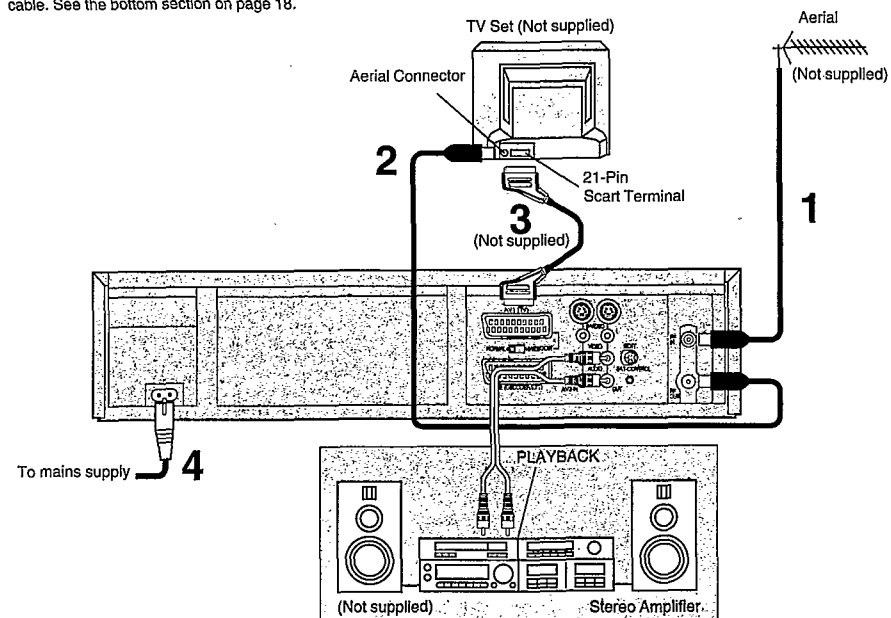


Connection to a TV Set with 21-Pin Scart Terminal

- After making this connection, refer to page 19 or 20.
- Use the fully-wired 21-pin scart cable in step 3 when connecting this VCR to the TV with the "NEXTVIEWLINK", "Easy Link" or "Megalogic"-logo, otherwise it will not be possible to operate "Preset Download" or "Direct TV REC".

Note:

Set the RF output channel of the VCR to "—" (RF OFF) when the VCR is connected to the TV via the 21-pin scart cable. See the bottom section on page 18.



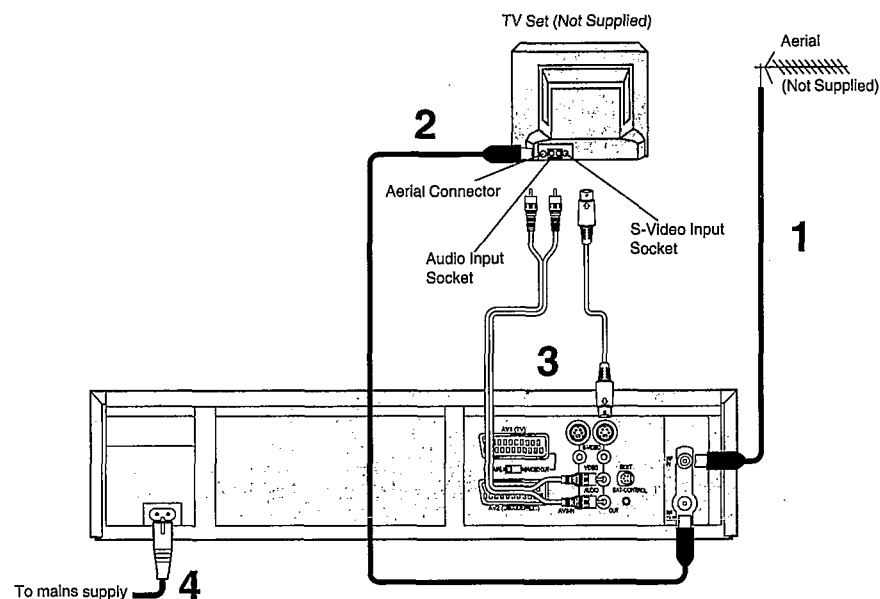
• Connection to a Stereo Amplifier

Connection to a TV Set with S-Video Socket

This VCR uses the S-VHS format that makes it possible to obtain high resolution and high picture quality by using the high-performance S-VHS video cassette tapes.

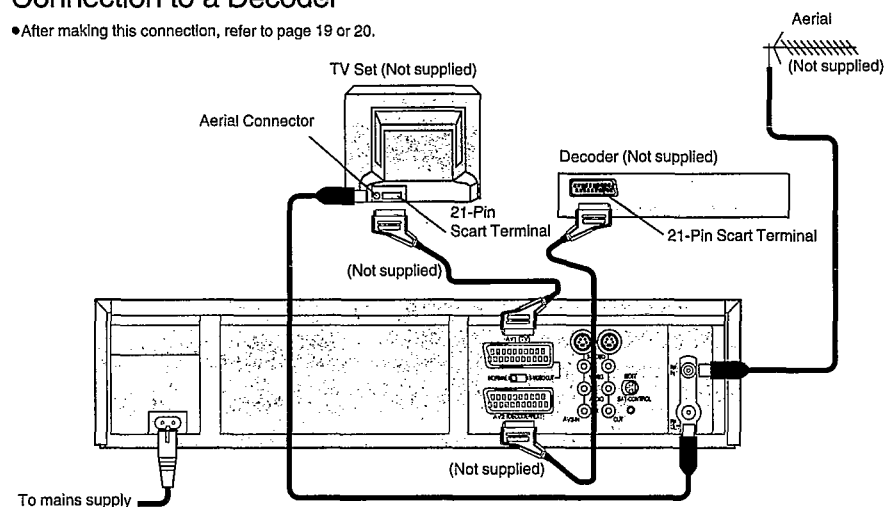
The conventional video sockets of VCRs output (input) a combination of the luminance signal (Y) and colour signal (C) which are recorded on the video-tape. The new S (Separate)-Video Socket allows separate transmission of signals in order to obtain clearer pictures.

The connection with the S-Video Cable can also be used for playback of a tape that was recorded in the conventional VHS system. The "S" in the "S-Video Socket" stands for "SEPARATED Y/C" not for "S-VHS".



Connection to a Decoder

After making this connection, refer to page 19 or 20.



Notes:

- If the TV set is provided with an RGB-compatible connector, connect the 21-pin AV cable from the VCR to this connector. Use the fully-wired 21-pin scart cable for connecting the TV set and VCR and for connecting the VCR and decoder.
- Set the RF output channel of the VCR to "—" (RF OFF) when the VCR is connected to the TV via the 21-pin scart cable. See the bottom section on page 18.
- When the decoder is connected to the AV2 socket, AV2 Connection must first be set to **DECODER**. (See page 48.)

AV LINK

With this button the connected colour TV set can be switched from TV mode to VCR mode (vice versa) when it is connected by means of 21-pin scart cable.

This makes a variety of functions possible, such as simultaneous recording and viewing when a Pay TV decoder or a satellite receiver has been connected.

VCR mode (VCR indicator lights):

To enjoy sound and pictures from the VCR.

- When **MENU** is pressed and the OSD (On Screen Display) screen is displayed, the unit also automatically switches to VCR mode. However, if the unit is originally in TV mode, the VCR indicator is not displayed.
- The unit also automatically switches to VCR mode when playback is started. However, the unit cannot be returned to TV mode during playback.

TV mode (VCR indicator goes off):

To watch another programme on the TV while recording on the VCR.

- Select the programme to be watched using the TV set's tuner.
- The sound and pictures of a different channel are received by the VCR.

	VCR	TV set
Power On	VCR mode	AV input selected
	TV mode	Input from TV set's tuner*
Power Off	—	Input from TV set's tuner

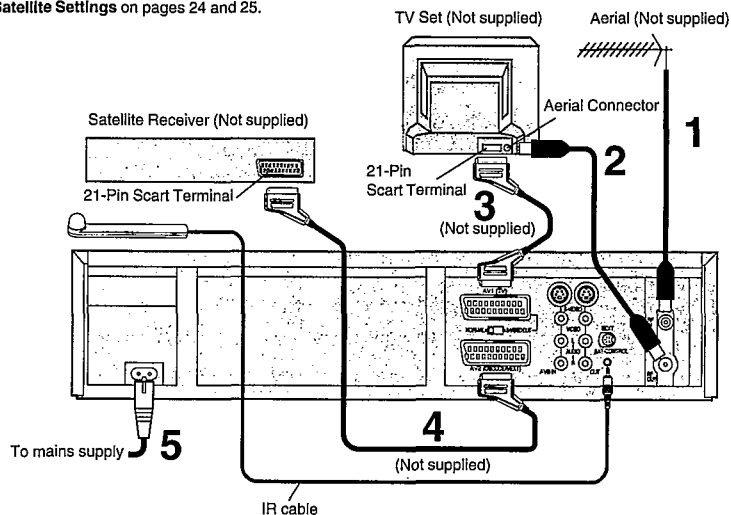
*When the VCR is set to the TV mode and the Pay TV channel is selected, the signals will still be scrambled even when Pay TV is selected by the TV set's tuner. At a time like this, either set the VCR to the VCR mode or switch the TV set's input signals to AV input.

Connection to a Satellite Receiver

- The satellite receiver control functions are activated when connection is made to one of the satellite receivers found on the attached list of compatible satellite receivers, provided that the settings from pages 23 to 25 have been performed. Also make absolutely sure that the satellite receiver is installed in a location as per the figure below.
- Also refer to the operating instructions for the satellite receiver.
- The unit may not operate properly if it has not been installed in a satisfactory position.

A By means of 21-pin Scart Cable

After making this connection, proceed with **Preset Download or Auto Setup** on pages 19 or 20 and then with **Satellite Settings** on pages 24 and 25.

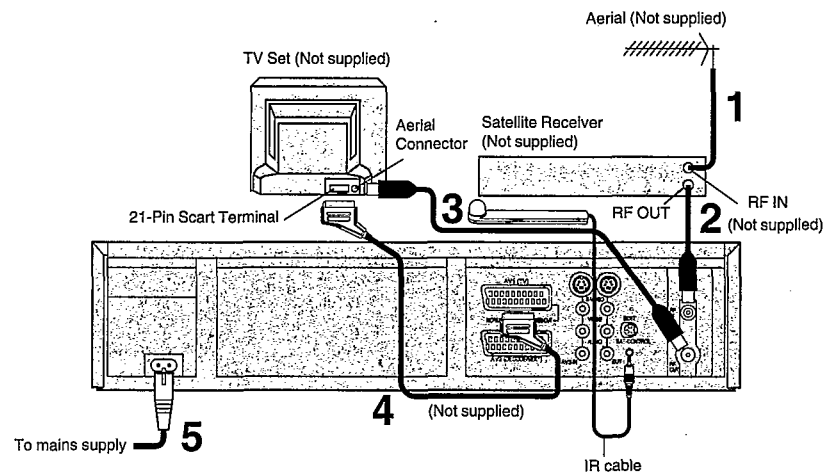


Notes:

- Set the RF output channel of the VCR to "—" (RF OFF) when the VCR is connected to the TV via the 21-pin scart cable. See the bottom section on page 18.
- When a decoder is to be connected in addition to the satellite receiver, read the Operating Instructions accompanying the decoder.
- The AV LINK function may not work, depending on the type of satellite receiver.
- When the satellite receiver is connected to the AV2 socket, **AV2 Connection** must first be set to **EXT.** (See page 48.)

B By means of RF Coaxial Cable

After making this connection, proceed with **Preset Download or Auto Setup** on pages 19 or 20 first, and then with **Satellite Tuning** on page 23 and **Satellite Settings** on pages 24 and 25.

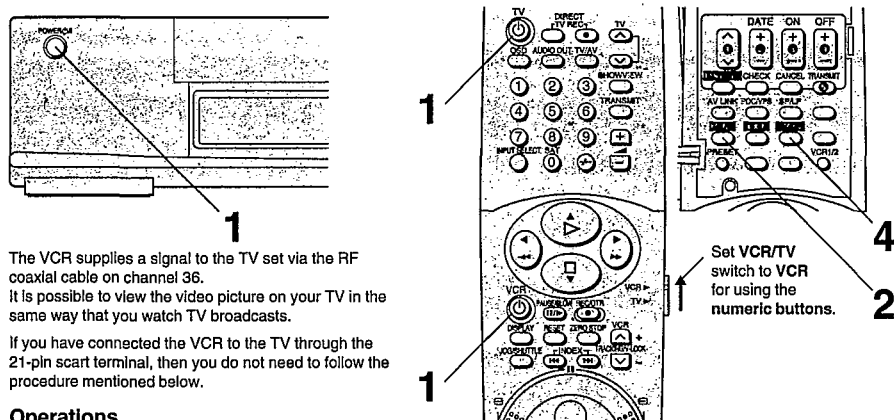


RF output channel of the satellite receiver should be adjusted away from channel 36, which is used by the VCR, e.g. re-adjust to channel 33.

Note:

Set the RF output channel of the VCR to "—" (RF OFF) when the VCR is connected to the TV via the 21-pin scart cable. See the bottom section on page 18.

Tuning the TV to your VCR



The VCR supplies a signal to the TV set via the RF coaxial cable on channel 36. It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VCR to the TV through the 21-pin scart terminal, then you do not need to follow the procedure mentioned below.

Operations

- Turn on the TV and VCR.
- Keep **MENU** pressed for 5 seconds or more.
● Press the button until "Ch" appears in the VCR display.
- On Screen Display
(Test Pattern)
Set the TV to an unused position which you wish to use for your video playback.
● Tune the TV until the test pattern appears on the screen.
- Press **STORE** to exit the Test Pattern screen. The **Country-Selection** display appears.
Now refer to page 20.

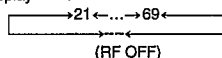
Use the remote controller for changing the RF output channel setting:

If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (21-69).

Follow the steps 1 and 2 above.

- Enter the desired channel number (21-69) by using the **numeric buttons** or the **∨ ∨** of the remote controller.
● Set the RF output channel of the VCR to "—" (RF OFF) when the VCR is connected to the TV via the 21-pin scart cable.

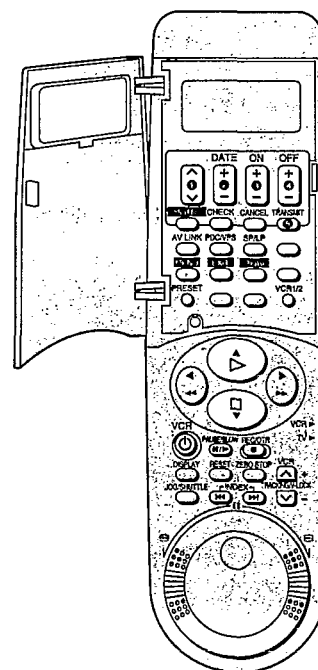
Press the "0" numeric button or the **∨ ∨** buttons to display "—".



- Press **STORE** to finish the setting mode.
● Return your TV to the new channel for the VCR.
● After the **Country-Selection** is set, the **Country-Selection** screen will not be displayed even if the RF output channel is changed and **STORE** is pressed.

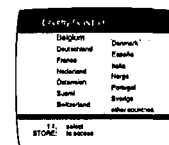
Preset Download

When the VCR is connected to a TV with the "NEXTVIEWLINK", "Easy Link" or "Megalogic"-logo using the fully-wired 21-pin scart cable, the station list data will be copied from the TV to the VCR and the TV channel will be preset on the VCR. This function is known as "Preset Download (Download from TV)".

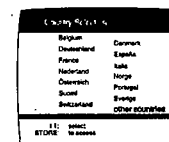
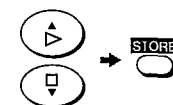


When the VCR is turned on after being connected to a TV with the "NEXTVIEWLINK", "Easy Link" or "Megalogic"-logo using the fully-wired 21-pin scart cable, follow the procedure below.

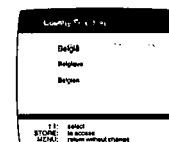
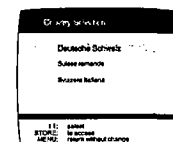
On Screen Display



- Select the desired country.

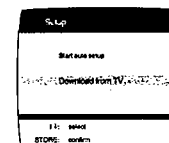
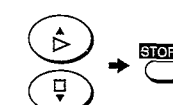


- When Switzerland or Belgium has been selected, operation moves to the screen which follows. Select the item in accordance with the language required.

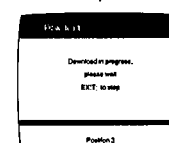


- Select Download from TV.

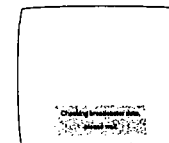
- When performing Manual Tuning described hereafter on page 43, be sure to select **Start auto setup**. This is because when the tuning contents for the TV are changed, this information is downloaded to the VCR again, possibly erasing the independent contents input by Manual Tuning.



- Downloading is started automatically.



- When the downloading has finished, Short ATP (Auto Tuner Preset) is started automatically.



Note:

Download will not work when the VCR is connected to a TV with the "NEXTVIEWLINK", "Easy Link" or "Megalogic"-logo but without a fully-wired 21-pin scart cable.

In this case, perform **Auto Setup** on the next page.

Auto Setup

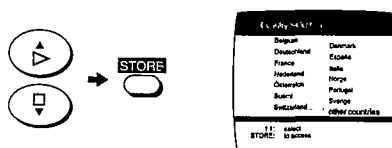
Auto Setup

When the VCR is turned on after connecting to a TV other than a TV with the "NEXTVIEWLINK", "Easy Link" or "Megalogo"-logo using the fully-wired 21-pin scart cable, follow the procedure below.

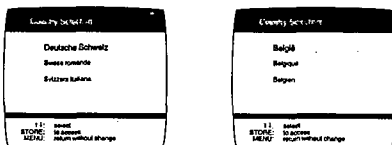
On Screen Display



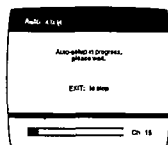
Select the desired country.



•When Switzerland or Belgium has been selected, operation moves to the screen which follows. Select the item in accordance with the language required.



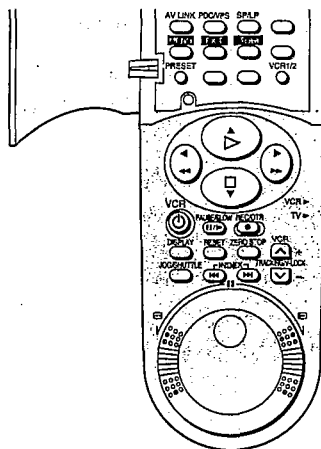
Auto Setup (Auto tuning and Auto clock setting) starts automatically.



•The Auto setup is searching for TV station from VHF minimum to UHF maximum and memorizing the data for every programme position. The other programme positions are skipped.
•The Auto setup takes five or more minutes to complete the search for TV station and the clock setting.

Notes:

- If VCR is not correctly set by Auto setup, see **Various Settings** on pages 43-46.
- Auto clock setting will not work correctly if teletext information is not available. If the clock setting screen appears after auto tuning has been completed, set clock manually. See page 46.
- Clock Information is subject to teletext information. If year information is not in teletext or time information in teletext is incorrect, set clock manually. See page 46.

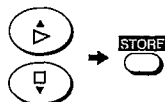


Viewing the TV station list

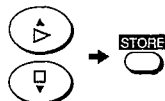
1 Press MENU.



2 Select Station list.



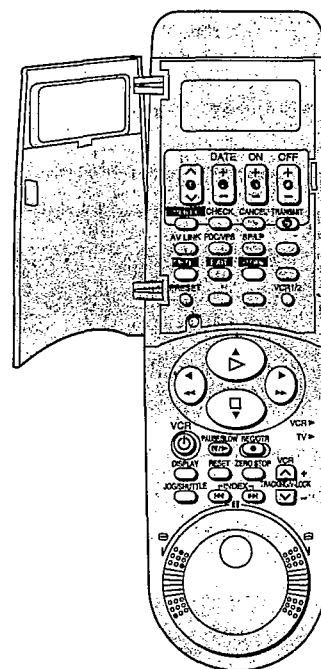
3 Select the desired TV station, if you want to view the broadcast.



Pos.	Name	Ch.	Pos.	Name	Ch.
1	ARD	1	11	BR1	11
2	ZDF	2	12	RTL	12
3	AD	3	13	SAT	13
4	WDR	4	14	PRO1	14
5	SWF	5	15	PRO2	15
6	BR3	6	16	PRO3	16
7	BR4	7	17	PRO4	17
8	BR5	8	18	PRO5	18
9	BR6	9	19	PRO6	19
10	BR7	10	20	PRO7	20

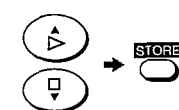
Auto Setup Feature Important Information (Only after performing Auto Setup)

The Auto Setup feature tunes in your channels automatically. However, under certain circumstances in some transmission areas certain channels may not be assigned a channel name or their normal channel position. If this is the case they will need to be tuned manually. If Auto setup is not successful, please follow the steps below.

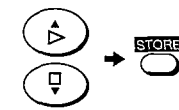


Operations

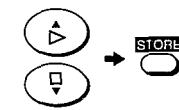
1 Press MENU, and then select Settings.



2 Select Tuning.



3 Select Manual.



4 The STATION LIST is now displayed. (Channel information will vary.)

Pos.	Name	Ch.	Pos.	Name	Ch.
1	ARD	1	11	BR1	11
2	ZDF	2	12	RTL	12
3	AD	3	13	SAT	13
4	WDR	4	14	PRO1	14
5	SWF	5	15	PRO2	15
6	BR3	6	16	PRO3	16
7	BR4	7	17	PRO4	17
8	BR5	8	18	PRO5	18
9	BR6	9	19	PRO6	19
10	BR7	10	20	PRO7	20

If all station names are displayed, no manual tuning adjustment is needed.

However, follow the steps on the next page when there is a * mark at the beginning of the station name display, even if the station name is displayed.

If manual tuning adjustment is required, follow the steps indicated below.

When changing or installing station name;

Operations

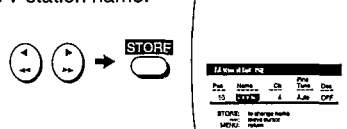
Follow steps 1 to 3 on the previous page.

- 4** Select the station(s) named *□□□□. Establish which channel you are viewing, by checking your TV Guide/ Newspaper.



• "□" Indicates the position number or station name. This is the same as steps 6 and 7.

- 5** Next, highlight the TV station name.



- 6** Enter characters into all five *□□□□ positions, from the table using the arrows and press **STORE** after each character. Use blank space if required, to enter a blank select the area between Z and *.



- 7** Press **MENU** once.

If any other TV station names are marked *□□□□, repeat steps 4→7.



Note:

See pages 43 and 44 for changing the programme position.

Satellite Settings

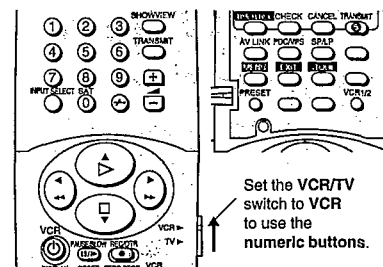
Satellite Tuning

When the RF connection of ⑧ on the satellite receiver connection page has been performed, the following settings must be carried out in order to activate satellite control.

These settings are not necessary when the 21-pin cable ⑨ has been used for the connection. (See page 16.)

Preparations

- Confirm that the TV is on and the VCR viewing channel is selected.
- Turn on the VCR.



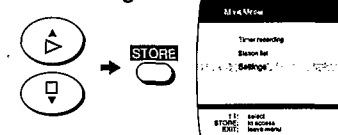
Set the VCR/TV switch to VCR to use the numeric buttons.

Follow the operation guide on screen display.

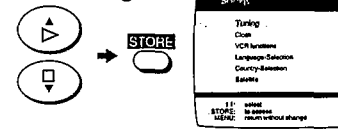
Operations

- 1** Press **MENU**.

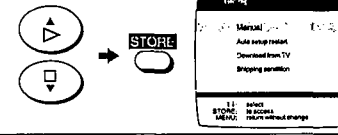
- 2** Select **Settings**.



- 3** Select **Tuning**.



- 4** Select **Manual**.



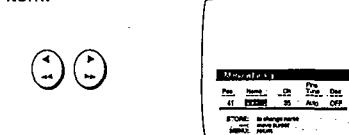
- 5** Select unoccupied **Programme position**.



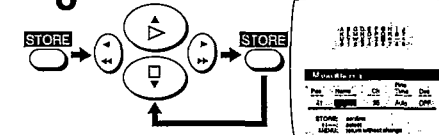
- 6** Select a channel (Ch) on which satellite broadcasts can be viewed. Ensure that the VCR/TV switch is set to VCR.



- 7** Select the TV station name (Name) item.



- 8** Enter "SAT _ _".



- "_ _" indicates two blank spaces. Enter the space to the right of "Z" on the keyboard.
- "SAT" is a special term; use it only when a satellite receiver is connected.
- If "SAT" is already displayed, this step is unnecessary.

- 9** Press **MENU**, and then press **EXIT**.

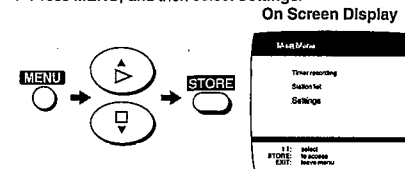
Note:

When Preset Download (Download from TV) has been performed, change the name of the channel for viewing the satellite broadcast on the TV to "SAT" instead of executing this page (refer to the operating Instructions of the TV). If this step is taken, Preset Download is performed again automatically, and the name of the VCR's SAT channel is also changed.

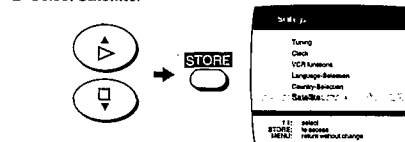
Satellite Setting

Proceed with the settings described below in order to activate the satellite receiver control functions. These settings are supported only by the satellite receivers found on the attached list of compatible satellite receivers.

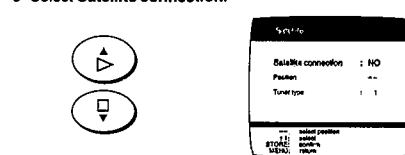
1 Press **MENU**, and then select **Settings**.



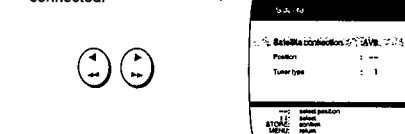
2 Select **Satellite**.



3 Select **Satellite connection**.

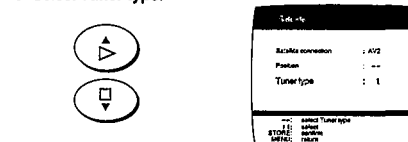


4 Select the position where the satellite receiver is connected.

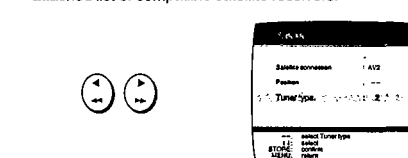


- NO: When the satellite receiver is not connected to the VCR.
 RF: When the satellite receiver is connected to RF IN socket of the VCR.
 AV1: When the satellite receiver is connected to AV1 socket of the VCR.
 AV2: When the satellite receiver is connected to AV2 socket of the VCR.
 • The **Position** item is also automatically set when **RF** has been selected, and cannot be changed here.

5 Select **Tuner type**.

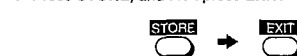


6 First check the attached list of compatible satellite receivers, and then set the tuner type number. It is not possible to control a receiver which is not on the attached list of compatible satellite receivers.



- It is also possible to select by pressing numeric button.

7 Press **STORE**, and then press **EXIT**.



Preset Type

The satellite receiver mode must be set before attempting to select satellite channels or perform timer recording. The procedure to set the mode can be divided into the following 5 types by satellite receiver. Check which one applies on the attached list before proceeding.

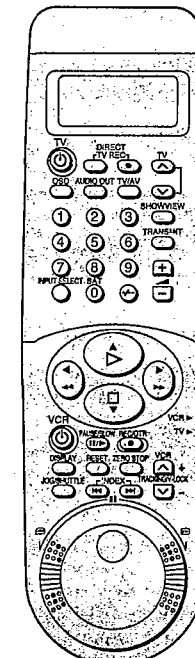
Preset type	Controllable functions
A	Keep the satellite receiver's power ON.
B	No action needs to be taken. (The satellite receiver's power may even be OFF.)
C	After having turned on the satellite receiver's power, select the 2-digit display mode.
D	Turn on the satellite receiver's power, and switch to the tuner used by the VCR.
E	Turn on the satellite receiver's power, and switch to the tuner used by the VCR. Then select the 2-digit display mode for the satellite receiver.

Check out the compatible satellite receiver list on the attached list thoroughly before purchasing a new receiver.

Notes:

- The VCR may not be able to control some products or models of satellite receiver, due to the choice of remote control coding being beyond our control.
- Check that the satellite receiver can be properly controlled.
- Try satellite broadcast timer recording once to check that timer recording works properly.

How to select the satellite channel



Set VCR/TV switch to VCR for using the numeric buttons.

Press the numeric buttons on the remote controller.

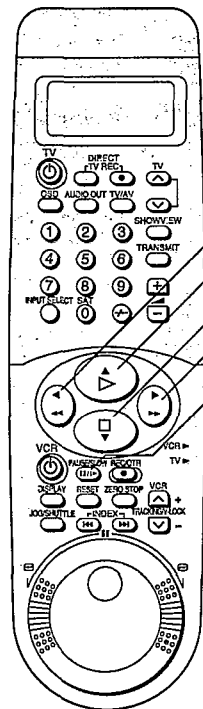
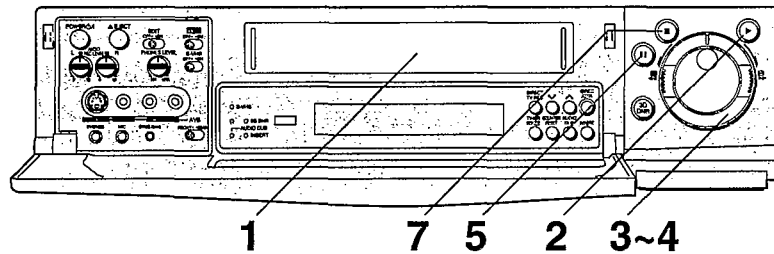
- Ensure that the **VCR/TV** switch is set to **VCR**.

SAT 9: 0 → 0 → 9

SAT 19: 0 → 1 → 9

- There will be a slight delay after pressing a button before channel change occurs. This is due to signal conversion.
- The range of satellite channels available for selection is 1 through 99.
- With some satellite receivers, it is not possible to select satellite channels up to 99.
- With some satellite receivers, it is not possible to select any more channels beyond the highest number of the channels which can be selected by the satellite receiver if that number is 99 or less.
- With some satellite receivers, it is necessary to leave a short interval after selecting one channel before attempting to select another channel.
- If the display on the satellite receiver fails to indicate the channels, refer to the operating instructions of the satellite receiver and follow the procedure for displaying the channels.

Playback



Operations	Display Symbols	
1		Insert a recorded cassette tape.
2		Start viewing the picture.
3		Search forward by tapping ▶▶ (FAST FORWARD) . •To change back to normal playback, press ▷ (PLAY) .
4		Search backward by tapping ◀◀ (REWIND) . •To change back to normal playback, press ▷ (PLAY) .
5		View a still picture. •Press PAUSE/SLOW or (PAUSE/STILL) . •To continue the normal playback, press ▷ (PLAY) , PAUSE/SLOW or (PAUSE/STILL) .
6		View a slow motion picture. •Keep PAUSE/SLOW pressed for 2 seconds or more. •To continue the normal playback, press ▷ (PLAY) .
7		Stop viewing the picture.

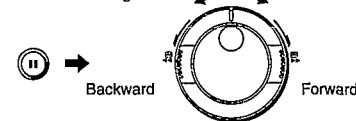
Note:

If you keep **▶▶ (FAST FORWARD)** or **◀◀ (REWIND)** pressed in step 3 or 4, search playback is activated while the button is pressed, and operation returns to normal playback when the button is released.

Other Playback Functions

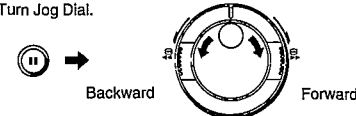
To change the Playback Speed

- 1 Press **|| (PAUSE/STILL)** on the VCR or **JOG/SHUTTLE** on the remote controller.
- 2 Rotate Shuttle Ring.



To locate the Desired Picture Exactly

- 1 Press **|| (PAUSE/STILL)** on the VCR or **JOG/SHUTTLE** on the remote controller.
- 2 Turn Jog Dial.



To obtain High Speed Picture during Fast Forward or Rewind

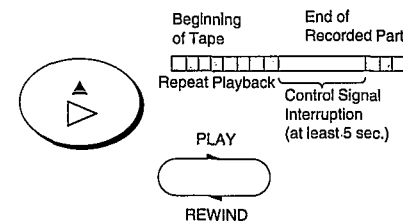
Keep **▶▶ (FAST FORWARD)** pressed during fast forward.
Keep **◀◀ (REWIND)** pressed during rewind.



- The same operation can also be performed by turning the Shuttle Ring on the VCR.

To playback the Recorded Part Repeatedly

Keep **▷ (PLAY)** pressed for 5 seconds or more.
"R" appears on the On Screen display.



- Press **□ (STOP)** to release from Repeat Playback mode.

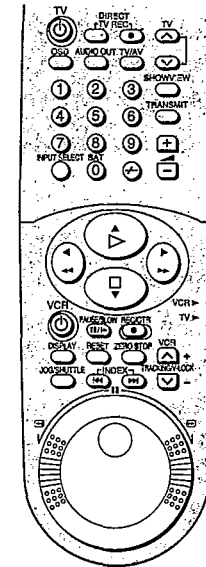
To return to a Specified Scene

- 1 Press **RESET** to set the counter to 0:00.00.



- 2 After playback, press **ZERO STOP** in the stop mode.

- The tape will be rewound or fast forwarded to 0:00.00 approximately.



Notes:

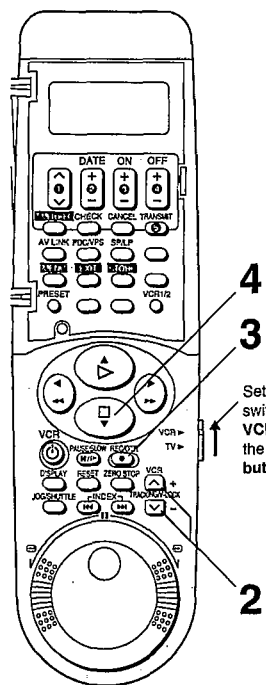
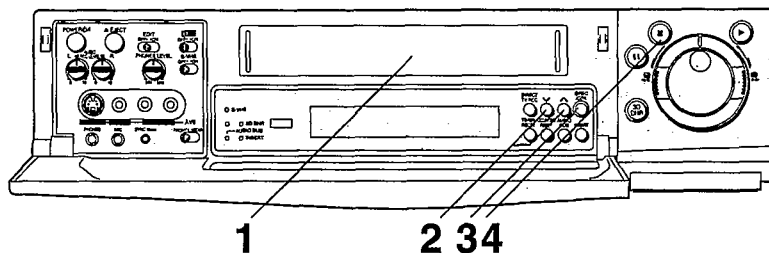
- Audio reproduction of linear (conventionally recorded) tapes will be monaural when played back on the FM Hi-Fi video recorders.

- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

- In LP mode only:

1. During any playback mode other than normal playback, the picture may have some noise bars, the colour may be unstable, or a black and white picture may appear.
2. When playing back a tape which was recorded on another VCR, it may be necessary to adjust the Tracking Control. In some cases the picture quality may still be inferior. This is due to limitation of format.

Manual Recording



Operations Display Symbols

- 1 Insert a video cassette with an intact erasure prevention tab.
• If it has already been inserted, press **POWER** (VCR) to turn the VCR on.
- 2 Select TV station.
• It is also possible to select by pressing numeric button.
• Ensure that the VCR/TV switch is set to VCR.
- 3 Start recording.
- 4 Stop recording.

To select the Desired Tape Speed

Press **SP/LP** before recording.



To Interrupt Recording

Press **PAUSE/SLOW** or **II** (**PAUSE/STILL**) during recording.
Press again to continue recording.

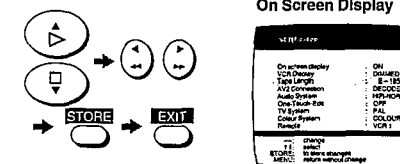


To record One TV Programme while Viewing Another Programme

- 1 Refer to the manual recording operations steps 1 to 3.
- 2 Select the TV programme on your TV set you wish to view at the present time.

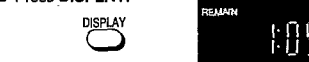
To display the Approximate Remaining Tape Time

- 1 Select **Tape Length** from On Screen Display and select the corresponding cassette tape length. See page 48.



- ◀ E-180: For E30, -60, -90, -120 and -180 tapes.
- E-195: For E195 tape.
- E-240: For E240 tape.
- E-260 ▶: For E260 and -300 tapes.

- 2 Press **DISPLAY**.



→ Clock → Counter → Remaining Tape Time →

- The remaining tape time may not be displayed correctly depending on the tape used.

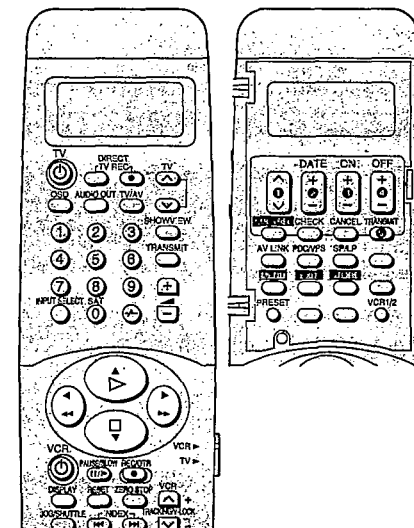
Recording of Stereo and Bilingual Programmes

- 1 Recording is automatically made in the stereo or bilingual mode. This prevents errors in the selection of the dubbed or the original language.
- 2 During playback press **AUDIO OUT** to select the desired sound mode. See page 8.



Notes:

- When a video cassette with a broken off tab is inserted, the "CO" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.



The NICAM Broadcast System (NV-HS950EC only)

NV-HS950EC is equipped with the NICAM sound system also.

NICAM is a 2 Channel sound broadcast system to provide either a high quality stereo sound track or 2 Independent MONO sound tracks, M1 and M2.

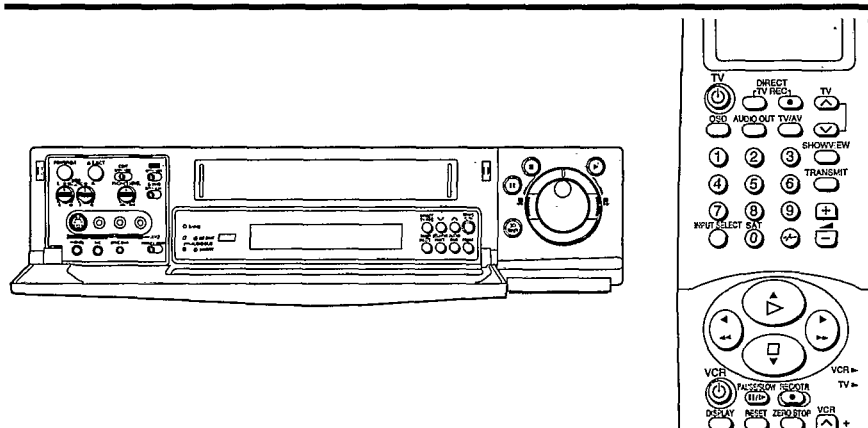
NICAM programmes are always accompanied by standard sound broadcasts and you can select the desired sound with **AUDIO OUT** (See page 8) during playback.

- The NICAM digital stereo sound can only be recorded on the Hi-Fi audio track.

- To record the regular sound (ordinary normal sound) on the FM audio tracks when a Stereo, Bilingual or NICAM programme is received, select **Mono ON** during manual tuning procedure. See page 43.

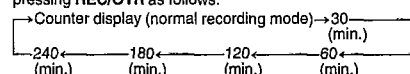
Important Note for the NICAM System

When NV-HS950EC is switched on, the tuner will automatically switch to a NICAM broadcast, if NICAM is being transmitted. During test transmissions, it is possible that the sound received doesn't correspond to the picture being viewed. In order to receive a synchronized sound and picture, select monaural sound with **AUDIO OUT** (See page 8) or **Mono ON** setting. This will only apply until NICAM transmissions are fully operational. Even if the sound track is in MONO, the stereo indicator will appear.



One-Touch Recording (OTR)

Whenever you are in a hurry to start a timer recording with automatic stop in your absence, simply set the recording duration by pressing **REC/OTR** repeatedly. The duration indicated on the VCR display changes by pressing **REC/OTR** as follows:



Preparation

Insert a video cassette with an intact erasure prevention tab.

Operations

1 Ready the video source which is to be recorded, and start recording.

2 Press **REC/OTR** repeatedly to select the desired recording duration.



- The VCR will automatically switch off when OTR is completed. To turn the VCR on again, press **POWER** (VCR).

Notes:

- The OTR function works during normal recording or Direct TV REC.
- When the tape reaches its end during OTR, the VCR will turn itself off.
- To stop OTR at any time, press **□ (STOP)** or **POWER** (VCR).

Direct TV REC

When you want to record a TV programme while you are watching TV, simply press the **DIRECT TV REC**.

However, this function works only when this VCR is connected to a TV with the "NEXTVIEWLINK", "Easy Link" or "Megalogic"-logo using the fully-wired 21-pin scart cable.

Preparation

Insert a video cassette with an intact erasure prevention tab.

Operation

When you are watching TV and you want to record the programme quickly, press the **DIRECT TV REC**. Then the recording will start.



- It is not necessary to adjust the programme position of your VCR to the TV station that you are watching now.

Notes:

- Even if the programme positions are not the same, the programme position of the VCR switches to the same position of the TV. Upon completion of the recording, the programme position of the VCR returns to the previous position.
- In some cases, it may not be possible to change the TV channel during Direct TV REC.
- Check beforehand whether the tape may be used for recording.

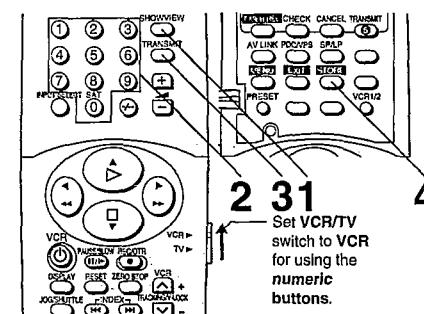
Timer Recording

ShowView Programming

Programming is now easier than ever: simply enter the ShowView number provided in the programme schedule column carried by newspapers and magazines. ShowView numbers are numbers which are assigned to each programme listed in the TV programme schedule carried in newspapers and TV guides. When these numbers are entered and **TRANSMIT** is pressed, the numbers are converted into the actual programming.

Preparations

- Insert a video cassette with an intact erasure prevention tab.
- Confirm that the TV is on and the VCR viewing channel is selected.
- Ensure that the **VCR/TV** switch is set to **VCR**.



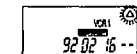
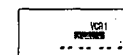
Operations

1 Press **SHOWVIEW**.

SHOWVIEW

2 Enter a ShowView number.
Example: 920216

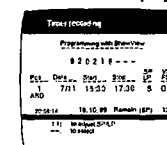
Display Symbols



3 Press **TRANSMIT**.



On Screen Display



- To extend the ending time or to make any corrections, use buttons **▲** **▼** **◀** **▶** or **PDC/VPS**.
- See page 35 for PDC/VPS recording.

If the "—" appears in the programme position:

Select the programme position of your VCR which receives the TV station you entered at step 2 using button **▲** or **▼**.

•After several seconds have elapsed, the message display at the bottom of the OSD is replaced by the operation guide display.

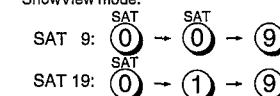
•Next time ShowView code for this station is entered, the correct position will appear.

When satellite broadcasts have been programmed:

Only when first time use ShowView code for satellite channels, "—" appears on the programme position item.

In this case, press the numeric buttons to input the satellite channel.

Press the **SHOWVIEW** button to release the ShowView mode.



- Next time ShowView code for this station is entered, the correct position will appear.

4 Press **STORE** to confirm.

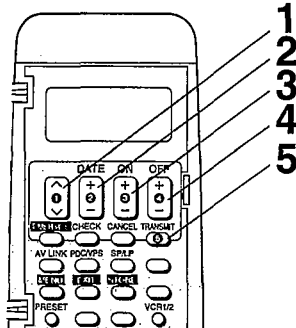


- The VCR will be in the timer recording standby mode after about 20 seconds, if **STORE** is not pressed.

Notes:

- To select the desired tape speed, press **SP/LP** button in step 2.
- To release from the standby mode, press **TIMER REC**.
- When the ShowView number is used for programming, the recording time may be slightly longer than the actual programme time.
- When programming two or more programmes, repeat steps 1-4.
- The procedures for checking and cancelling a timer programme are the same as on page 34.

Using the Remote Controller



For Example:

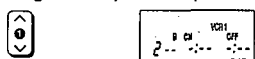
Programme position (channel); 2
 Date; 27th, October
 Starting time; 20:00
 Ending time; 21:30

Preparation

- Insert a video cassette with an intact erasure prevention tab.
- Open the door of the remote controller.

Operations Display Symbols

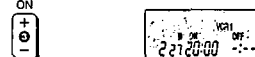
1 Set Programme position (channel) "2".



2 Set Date "27".



3 Set Starting time "20:00".



- When it is kept pressed, the indication changes in 30-minute steps.

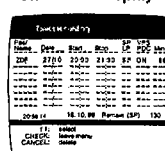
4 Set Ending time "21:30".



5 Press TRANSMIT.



On Screen Display



- The VCR will be in the timer recording standby mode after about 20 seconds.
- To release from the standby mode, press **TIMER REC.**

- See page 35 for PDC/VPS recording.
- To make a change to what has been programmed (for instance, to change **VPS/PDC** to **ON** or **OFF**), follow the procedure for On Screen Display Programming. (See page 33.)

Weekly Timer Recording

In step 2, select the desired day by pressing **DATE** —. For example, **SU** (Sunday)



(**SU**=Sunday, **MO**=Monday, **TU**=Tuesday, **WE**=Wednesday, **TH**=Thursday, **FR**=Friday, **SA**=Saturday)

Daily Timer Recording

For this timer function, several groups of days can be selected.

- (A) Daily recording from Monday to Friday
- (B) Daily recording from Monday to Saturday
- (C) Daily recording from Sunday to Saturday

In step 2, select the desired days by pressing **DATE** —. For example, **@**



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 (TV), AV2 (DECODER/EXT) Socket or AV3 (Audio/Video/S-Video input sockets), select the A1, A2 or A3 Indicator for the programme position.

- A1: Through the AV1 (TV) socket.
- A2: Through the AV2 (DECODER/EXT) socket.
- A3: Through the AV3 (AUDIO IN/VIDEO IN/S-VIDEO IN) sockets.



Selecting the Desired Tape Speed

Press **SP/LP** in any of steps 2-4.



Checking and Cancelling a Timer Programme

The procedures for checking and cancelling a timer programme are the same as on page 34.

Note:

Timer recording of satellite broadcasts cannot be performed using **∇**, **▲**, **DATE**, **ON**, **OFF**, and **TRANSMIT** on the remote controller.

Using On Screen Display

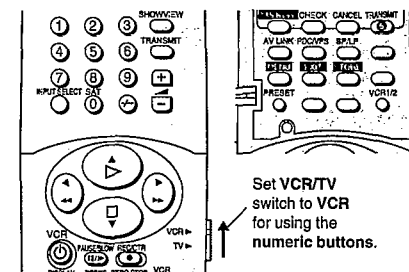
Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including weekly and daily programmes.

Preparations

- Insert a video cassette with an intact erasure prevention tab.
- Confirm that the TV is on and the VCR viewing channel is selected.

For Example:

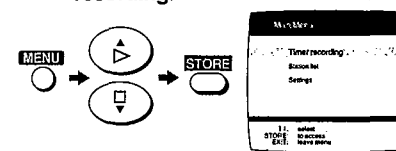
Programme position (channel); 2
 Date; 27th, October
 Starting time; 20:02
 Ending time; 21:30
 (Present date; 16th, October)



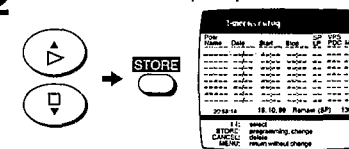
Follow the operation guide on screen display.

Operations

1 Press MENU, and then select Timer recording. On Screen Display

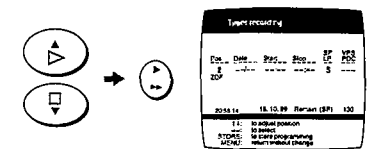


2 Select the unoccupied position.

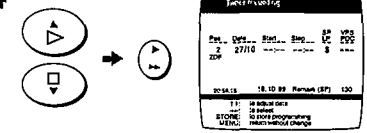


3 Set Programme position (channel) "2".

- Press **◀** to return to the previous item.

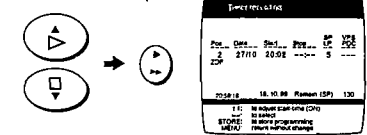


4 Set Date "27/10".

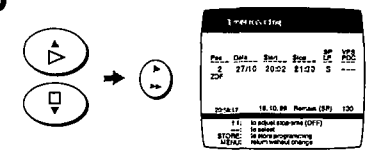


5 Set Starting time "20:02".

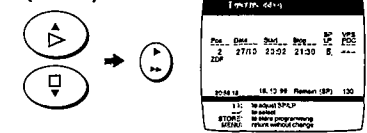
- When it is kept pressed, the indication changes in 30-minute steps.



6 Set Ending time "21:30".

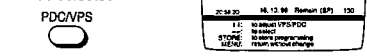


7 Select the desired Tape speed (SP/LP).



8 Select VPS/PDC ON or OFF (---).

- See page 35 for PDC/VPS recording.
- During satellite channel programmed recording, **VPS/PDC ON** cannot be selected.



9 Press STORE.

10 To activate timer recording, press **TIMER REC.**

Weekly Timer Recording

In step 4, select the desired day by pressing ▼.

Daily Timer Recording

For this timer function, several groups of days can be selected.

- (A) Daily recording from Monday to Friday
- (B) Daily recording from Monday to Saturday
- (C) Daily recording from Sunday to Saturday

In step 4, select the desired days by pressing ▼.

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 (TV), AV2 (DECODER/EXT) socket or AV3 (Audio/Video/S-Video input sockets), select the A1, A2 or A3 indicator for the programme position.

- A1: Through the AV1 (TV) socket.
- A2: Through the AV2 (DECODER/EXT) socket.
- A3: Through the AV3 (AUDIO IN/VIDEO IN/S-VIDEO IN) sockets.

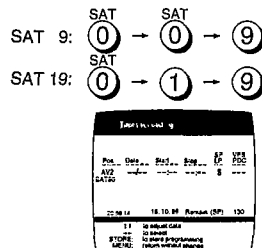
Setting other Programmes in Succession

Repeat steps 2-9.

Satellite Channel Programmed Recording

When selecting the programme position (channel), use the numeric buttons to select a satellite channel.

- Ensure that the VCR/TV switch is set to VCR.

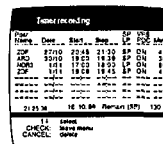


- PDC/VPS programming is not possible in conjunction with satellite programmed recording.
- In the case of some satellite receivers, the power remains off for several seconds when timer recording commences.
- With some satellite receivers, the first several seconds will not be recorded when the timer recording function is used.
- With some satellite receivers, the power goes off if the recording is stopped while timer recording is still underway.

Checking a Timer Programme

- The VCR must be turned on, or the timer recording indicator "TR" is lit.
 - Confirm that the TV is on and the VCR viewing channel is selected.
- Press **CHECK**.
- On Screen Display may be distorted in the PDC/VPS recording standby mode.

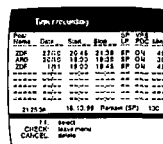
On Screen Display



Cancelling a Timer Programme

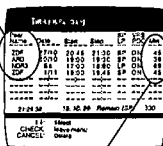
- The VCR must be turned on or in timer recording standby mode.
- Confirm that the TV is on and the VCR viewing channel is selected.

- 1 Press **CHECK**.
- 2 Select the desired timer programme.
- 3 Press **CANCEL**.



Notes:

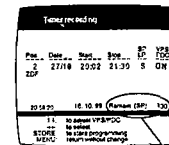
- If a timer recording is not completed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. the next day.
- However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.
- Either the Position number or the Station name is displayed here.



- For daily and weekly timer recording, the recording time for only one recording session is displayed.

Checking the remaining tape time

This displays the remaining time for the inserted tape.



Remain time indicator

- This indicator is not displayed unless the remaining tape time has already been indicated on the VCR display. Refer to page 29.

PDC (Programme Delivery Control)/VPS (Video Programme System)

The Programme Delivery Control (PDC) or the Video Programme System (VPS) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

Depending on the signals sent from the broadcasting stations, the PDC/VPS system may not operate properly even when VPS/PDC has been set to ON. Please check with the broadcasters in your area for details.

- In the case of PDC/VPS recording, use the **correct time** (PDC/VPS time) for recording the TV programmes. Set **VPS/PDC** to **OFF** when the recording time is not the correct time (PDC/VPS time). PDC/VPS recording is not performed when the time (PDC/VPS time) is incorrect, even if only by one minute. To find out the correct time (PDC/VPS time), consult Teletext, a newspaper or magazine, etc.

- If the actual broadcasting times of timer recordings overlap (regardless of whether they are PDC/VPS controlled), the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the PDC/VPS signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular PDC/VPS signal, the timer recording will be performed in the normal mode (without PDC/VPS) even if it was programmed for PDC/VPS. In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.

- The start times of scheduled programmes listed in the newspaper or magazine may be changed at a later date. Set **VPS/PDC** to **OFF** when programming a programme whose start time has been subsequently changed. Particular care must be taken in this respect with ShowView programming since **VPS/PDC** is automatically set to **ON** in some countries.
- If a programme listed in a newspaper or magazine has two ShowView numbers, use the ShowView number for VPS/PDC if you wish to proceed with VPS/PDC recording using ShowView programming.
- The default settings for **VPS/PDC** differ depending on the country concerned. Refer to the table shown below.

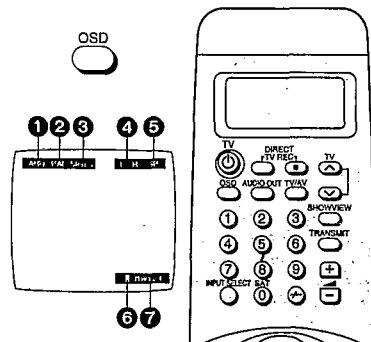
Programming method Selected Country	ShowView programming	Changes in ShowView programming start time	Non-Show-View programming
France, Belgium, Netherlands, Sweden, Denmark, Finland, Norway	ON	OFF	OFF
Germany, Switzerland, Austria, Other Countries	ON	ON	ON
Italy, Spain, Portugal	OFF	OFF	OFF

After auto tuning "—" appears for the **VPS/PDC** item at the outset in the case of a broadcasting station which is not transmitting VPS/PDC signals.

Other Functions

On Screen Display

Press **OSD** to make the On Screen Display appear on the TV screen.



- 1 TV station
- 2 TV system

- 3 **Stereo or Bilingual Indicator (NV-HS950EG)**
When receiving a TV programme, the type of sound system in which it is broadcast is automatically indicated.

Stereo, M1 and M2 Indicator (NV-HS950EG)
When receiving a TV programme with the Stereo, Bilingual or NICAM sound system, the type of sound system in which it is broadcast is automatically indicated.

Stereo: When receiving a Stereo/NICAM stereo broadcast.

M1 M2: When receiving a Bilingual/NICAM dual-sound broadcast.

M1: When receiving a NICAM monaural broadcast.

- 4 **Audio Output Mode Indicators**

The Left (L) and Right (R) Indicators show which sound mode is selected with **AUDIO OUT**.

Stereo: Both the L and R Indicators appear.

Left: The L Indicator appears.

Right: The R Indicator appears.

Normal: Both the L and R Indicators don't appear.

- 5 **Tape speed indicator**

- 6 **Tape running display**

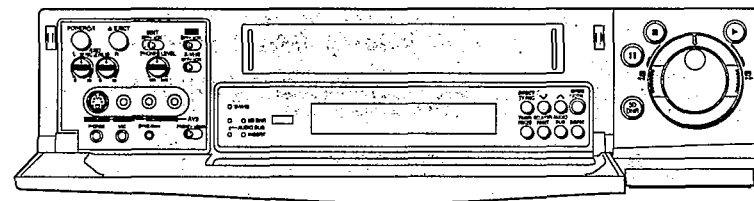
Stop, Eject	■
Rewind	◀◀
Fast Forward	▶▶
Playback	▶
Recording	●
Repeat Playback	R

- 7 **Present time/Tape counter/Remaining tap time/ Index Search/One-Touch Recording (OTR)**

Information	Display
Present time	17:24:31
Tape counter	-2:35.47
Remaining tape time	REMAIN 2:34
Index Search	▶▶ 02
One-Touch Recording (OTR)	OTR 60

Notes:

- When the item "On screen display" is set to OFF (See page 47.), the On Screen Display will not appear.
- When the programme position AV is selected or during playback, the On Screen Display (1, 2, 3) will not appear.
- The On Screen Display does not appear during special playback.



VHS Index Search System

It is very easy to find the beginning of each recording, because a special Index signal is recorded at the start of each recorded segment on the tape.

For example:

Searching for the 2nd recorded segment in the forward direction.

Press **INDEX** ▶▶ twice.

(This operation is performed while the VCR is in the stop mode or normal playback mode.)



- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX** ◀◀.
- Up to 20 index signals can be searched for in both directions.
- When the opposite **INDEX** button is pressed, the number shall be decreased till 1.
- The figure on the display is decremented by 1 each time an Index signal is located.
- The **INDEX** search function can only work correctly, if the index signals are spaced at least 3 minutes apart in the SP mode and 5 minutes apart in the LP mode.

Recording Index Signals

Index signals are recorded in following cases.

- When a recording is started by pressing **REC/OTR**.
- When timer recording is activated.

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VCR via a PAL system TV set.

- The playback picture may roll up or down. If the TV set is equipped with a V-HOLD control, it may be possible to stop the picture movement by adjusting this control.
- Depending on the TV set used, the picture may be in black and white. However, this is not an indication of a malfunction.
- The TBC function will not work.

Other Automatic Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VCR starts playback automatically.

VCR-off Playback

When the VCR is off, an inserted cassette can be played back by pressing **▶ (PLAY)**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

- During OTR, this function will not work.

Automatic Switching Off and Ejection

When the VCR is switched off, and inserted cassette can be ejected simply by pressing **EJECT**. The VCR will eject the cassette and automatically turn itself off again.

Editing

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.

Preparations

- Connect a Movie Camera or another VCR to this VCR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
A1: Through the AV1 (TV) socket.
A2: Through the AV2 (DECODER/EXT) socket.
A3: Through the AV3 (AUDIO IN/VIDEO IN/S-VIDEO IN) sockets.

Operations

- 1 Press **II (PAUSE/STILL)** on the recording VCR.

- 2 Search for the end of the previous recording.

- 3 Press **REC/OTR** to switch the VCR from the pause mode to the recording standby mode.

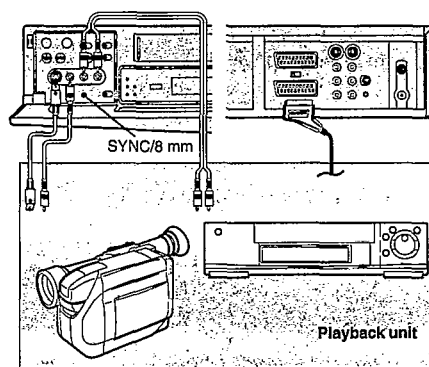
- 4 Start the new recording by pressing **II (PAUSE/STILL)** again.

- 5 Press **■ (STOP)** to stop recording.


Note:

The new sound will be recorded on both the normal and Hi-Fi sound tracks, only monaural sound recording is possible on the normal sound tracks.

Recording VCR



Synchronized Editing

It is possible to synchronize the playback start and stop of the Movie Camera with the recording start and stop of this VCR.

Preparations

- Connect a Movie Camera to this VCR with Synchro Connection Cord (VW-K1E).
- Turn **One-Touch-Edit** to **OFF** before connecting the Synchro Connection Cord. (See page 49.)

- 1 Put the VCR in the recording pause mode by pressing **REC/OTR** and **II (PAUSE/STILL)**.
- 2 Put the Movie Camera in the still playback mode at the point where you want to start editing.
- 3 Press **II (PAUSE/STILL)** on the VCR.
• The Movie Camera changes over to the playback mode and the dubbing will start automatically.

Synchronized Editing between the VCRs

When editing from another VCR equipped with the synchronized editing function, synchronized start and stop of both VCRs can be activated from this VCR.

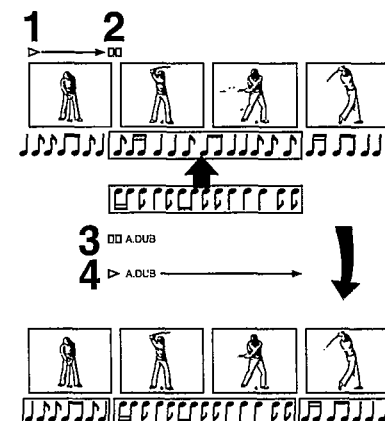
The operation is the same as described for synchronized editing from a Movie Camera.

Audio Dubbing

The audio dubbing is made on the normal audio track and erases the original sound on this track. On Hi-Fi audio tracks, however, the original sound is maintained.

Preparations

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
A1: Through the AV1 (TV) socket.
A2: Through the AV2 (DECODER/EXT) socket.
A3: Through the AV3 (AUDIO IN) sockets.



Operations	Display Symbols	
1		 Search for the starting point for audio dubbing.
2		 Press II (PAUSE/STILL) at the starting point.
3		 Set for audio dubbing by pressing AUDIO DUB . • On some televisions, the screen image may become unstable or begin to scroll at this point. However, this is not an indication of a malfunction. • The AUDIO DUB indicator will light.
4		 Start recording the new sound by pressing II (PAUSE/STILL) . • Stop recording by pressing STOP .

Note:

The new sound will be recorded on the normal sound track of the tape, and the original sound will remain on the Hi-Fi sound track. Only monaural sound recording is possible on the normal sound track.

To hear the new sound, select the normal sound track by pressing **AUDIO OUT**.
To hear the new sound and original sound mixed together, set Audio System to **HIFI-MIX**. (See page 48.)

Audio dubbing with Panasonic Hi-Fi VCR

General

- Due to VHS format reasons, audio dubbing can be performed only on the normal audio track.
- The Hi-Fi audio tracks cannot be influenced without erasing the video signal.
- The audio dubbing function is provided with an automatic recording function. The volume level cannot be adjusted. When dubbing to the Hi-Fi VCR, the volume level must be considered in advance.
- There are three types of audio dubbing (A-C):

A. Audio dubbing on the normal audio track

- Select the desired AV input.
- The microphone input may also be selected. In this case, the microphone signal has priority.
Disconnect the microphone when other audio signals are to be used.
- Locate the recording starting point and press **PLAY-PAUSE**.
- Press **AUDIO OUT** three times to select the normal audio track.
- Press **AUDIO DUB**.
- Start audio dubbing by releasing the pause function.
- After audio dubbing has been completed, rewind the tape and make sure that the normal audio track is selected. (Step 3)
- Check the audio dubbing.

B. Audio dubbing on the normal audio track with Hi-Fi Mix function

- Select the desired AV input.
- Locate the recording starting point and press **PLAY-PAUSE**.
- The Hi-Fi tracks should be set to playback.
 - When a videocassette is inserted, the Hi-Fi tracks are automatically set to playback.
 - Hi-Fi tracks must be recorded. Copy the audio signal, if necessary.
- Press **AUDIO DUB**.
- Start audio dubbing by releasing the pause function.
- After audio dubbing has been completed, rewind the tape and set **Audio System** to **HiFi-MIX**. (See page 48.)
- Check the audio dubbing.
The original sound and the new sound are heard simultaneously.

C. Audio dubbing on the normal audio track with original sound and new sound

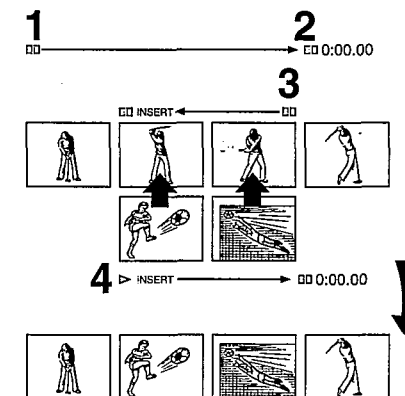
- Select the desired AV input.
- Locate the recording starting point and press **PLAY-PAUSE**.
- The Hi-Fi tracks should be set to playback.
 - When a videocassette is inserted, the Hi-Fi tracks are automatically set to playback.
 - Hi-Fi tracks must be recorded. Copy the audio signal, if necessary.
- Press **AUDIO DUB**.
 - Input the original signals of the Hi-Fi tracks (Audio-Out) to a mixing console (optional) and mix with the new sound as required.
- Start audio dubbing by releasing the pause function.
- After audio dubbing has been completed, rewind the tape and make sure that the normal audio track is selected. (Step 3)
- Check the audio dubbing.

Insert Editing

This is used to substitute one scene for another providing.

Preparations

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
 - A1: Through the AV1 (TV) socket.
 - A2: Through the AV2 (DECODER/EXT) socket.
 - A3: Through the AV3 (AUDIO IN/VIDEO IN/S-VIDEO IN) sockets.



Operations

Display Symbols

- | | | | |
|---|--|--|---|
| 1 | | | Press II (PAUSE/STILL) on the recording VCR. |
| 2 | | | Search for the Edit out (ending) point, and set the counter to 0:00.00 by pressing COUNTER RESET . |
| 3 | | | Search for the Edit in (starting) point, and press INSERT . <ul style="list-style-type: none"> The INSERT indicator will light. If you want to replace the sound on the "normal" audio track, press AUDIO DUB, too. (AV Insert Editing) Both the INSERT and the AUDIO DUB indicators will light. |
| 4 | | | Start insert editing by pressing II (PAUSE/STILL) . <ul style="list-style-type: none"> The insert editing will finish when the counter reaches 0:00.00. |

Note:

Insert Editing cannot be used on blank sections of a tape. In this case use Assembly Editing first.

The new sound will be recorded on the Hi-Fi sound track. If **AUDIO DUB** selected, the new sound will also be recorded on the normal sound track.

Only monaural sound recording is possible on the normal sound tracks.

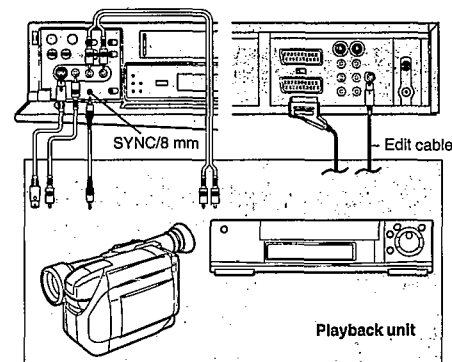
One-Touch-Editing

With this editing, it is easy to perform repeated assemble editing, insert editing or audio dubbing operations.

Preparations

- Before proceeding with the connections, check that the AC mains lead of both VCRs have been connected.
- Before the VCR is connected to a movie camera or another VCR, select **One-Touch-Edit** to **ON**. (See page 49.) The playback VCR display or movie camera viewfinder image may be abnormal if the edit cable is connected with **One-Touch-Edit** left **OFF**.
- Connect a movie camera or another VCR to this VCR as shown.
- Use the **SYNC/8 mm** socket when connecting this unit to a VCR or movie camera equipped with a LANC socket.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
 - A1: Through the AV1 (TV) socket.
 - A2: Through the AV2 (DECODER/EXT) socket.
 - A3: Through the AV3 (AUDIO IN/VIDEO IN/S-VIDEO IN) sockets.
- Upon completion of the One-Touch-Editing, disconnect the edit cable.

Recording VCR



Operations

- 1 Press **II (PAUSE/STILL)** on the recording VCR.



- 2 Search for the end of the previous recording.



- 3 Press **REC/OTR** to switch the VCR from the pause mode to the recording standby mode.



- The playback VCR will be in still mode.
- If **INSERT** or **AUDIO DUB** is pressed instead of **REC/OTR**, Insert Editing or Audio Dubbing can be performed.

- 4 Search for the Edit in (starting) point on the playback VCR.



- 5 Start One-Touch-Editing by pressing **II (PAUSE/STILL)** again.



- 6 Press **II (PAUSE/STILL)** at the Edit out (ending) point on the playback VCR.



- For Editing In succession, repeat 4 to 6.

- 7 Press **■ (STOP)** to stop editing.



Storing TV Broadcasts into your VCR

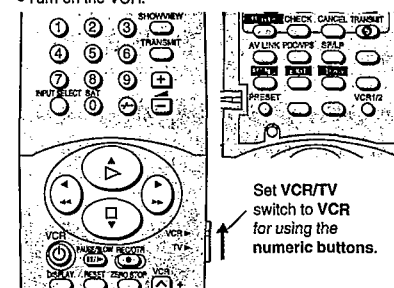
Introduction

The VCR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

If VCR is not correctly tuned by Auto setup, follow the procedure below.

Preparations

- Confirm that the TV is on and the VCR viewing channel is selected.
- Turn on the VCR.



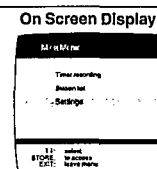
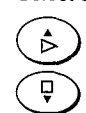
Manual Tuning Procedure

Follow the operation guide on screen display.

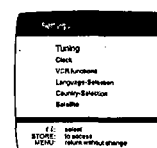
Operations

- 1 Press **MENU**.

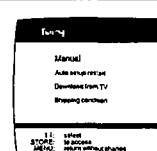
- 2 Select **Settings**.



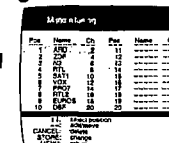
- 3 Select **Tuning**.



- 4 Select **Manual**.

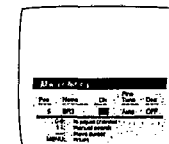


- 5 Select desired Programme position.



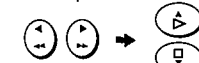
- 6 Select **Channel (Ch)**.

- Ensure that the VCR/TV switch is set to VCR.



- 7 Select **Dec ON** or **Dec OFF**.

- ON: To preset pay TV stations.
- OFF: To preset normal TV stations.



- 8 Use **◀▶** to display the next screen.

Select TV-System.

- PAL: For receiving PAL signal.
- MESECAM: For receiving SECAM signal.

NV-HS950EC only



- 9 NV-HS950EC only
Select **Mono OFF**.

- Select **Mono ON** to record the normal sound during a stereo, bilingual or NICAM broadcast or if the stereo sound is distorted due to inferior reception conditions.

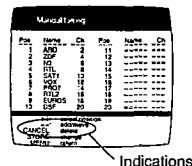
- 10 Press **MENU**, and then press **EXIT**.

Notes:

- When channels have been set with manual tuning, the channel position (Ch) will need to be entered in the highlighted box the first time ShowView is used.
- When **Preset Download (Download from TV)** has been executed, do not perform Manual Tuning. This is because when the tuning contents for the TV are changed, this information is downloaded to the VCR again, thereby erasing the independent contents input by Manual Tuning.

When changing (moving) the programme position, adding "Blank" positions and deleting stations;

These operations can be performed easily by following the indications of the On Screen Display.



Press ▲ or ▼ to select the desired programme position (station), and then follow the steps indicated below.

←: Press ◀ to add "Blank" position.

→: Press ▶ to change (move) the programme position.

CANCEL: Press CANCEL to delete the stations.

● These indications do not appear after performing Preset Download (Download from TV).

To change the TV station name:

After Step 5 but before Step 8, select the TV station name (Name) item using ◀ ▶, and then make the desired change. (See page 22.)

● No changes can be made to the TV station name while "SAT" is displayed when Satellite Connection is set to RF. (See page 24.)

Channel Plan

Channel Indication	TV Channel	
	Germany/Italy	Other Countries
2-12	*E2-E12	E2-E12
13-20	A-H (Only Italy)	—
21-69	21-69	21-69
74-78	S01-S05	S1-S5
80-82	S1-S3	M1-M3
83-89	S4-S10	M4-M10
90-99	S11-S20	U1-U10
121-141 Hyperband	**S21-S41	S21-S41

*In Italy: H1...(11), H2...(12)

**Only for 8 MHz channel raster

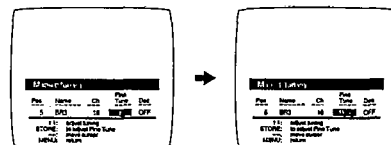
Fine Tuning Procedure

Follow steps 1 to 5 on page 43.

6 Select Fine Tune.

7 Press ▲ or ▼ to obtain the best tuning condition.

● To return the tuning to its former state, press STORE.



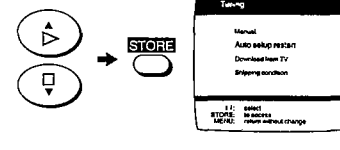
8 Press MENU, and then press EXIT.

Auto Setup Restart

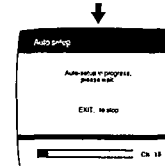
When your address changes, follow the procedure below. Follow the steps 1 to 3 on page 43.

4 Select Auto setup restart.

On Screen Display



5 Press STORE.

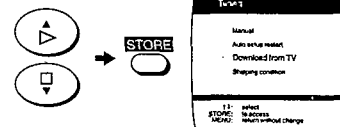


Download from TV

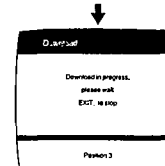
To perform the downloading again, follow the procedure below in the stop mode.

Follow steps 1 to 3 on page 43.

4 Select Download from TV.



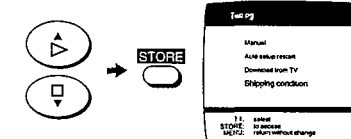
5 Press STORE.



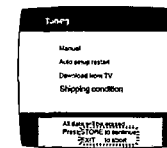
Shipping Condition

If you want to return the VCR to the factory-preset condition, follow the procedure below. Follow the steps 1 to 3 on page 43.

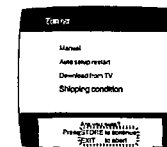
4 Select Shipping condition.



5 Press STORE.



6 Press STORE again.



Note:

To re-tune the VCR, disconnect and then reconnect the mains lead. If the VCR is off, turn on the VCR and then repeat the procedures on pages 18 to 22.

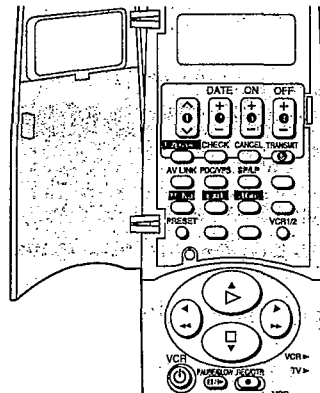
Setting the Clock of your VCR

The built-in clock is used to activate the timer for automatic recording and must be set to the correct time. The built-in digital clock employs the 24-hour system.

If VCR is not correctly set by Auto setup, follow the procedure below.

Preparations

- Confirm that the TV is on and the VCR viewing channel is selected.
- Turn on the VCR.



Manual Clock Setting

Follow the operation guide on screen display.

Operations

- Press MENU, and then select Settings.**
MENU → [Right Arrow] → [STORE]
- Select Clock.**
[Up Arrow] → [STORE]
- Select Manual setting.**
[Up Arrow] → [STORE]
- Set Time (H/M).**
• When it is kept pressed, the indication changes in 30-minute steps.
• Press [Left Arrow] to return to the previous item.
[Up Arrow] → [Left Arrow] → [Right Arrow]

- Set Date (D).**
[Up Arrow] → [Right Arrow]
- Set Month (M).**
[Up Arrow] → [Right Arrow]
- Set Year (Y).**
• There is no need to press [Left Arrow].
On Screen Display:
Time: H M
Date: D M Y
11: adjust year
STORE: to access
MENU: return without change
- Press STORE.**
• The clock will start.
- Press EXIT.**

Automatic Clock Setting

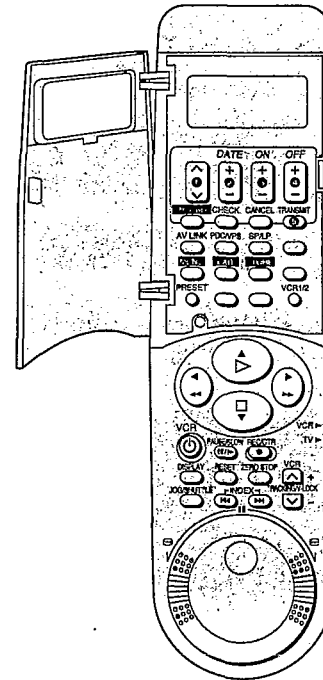
Follow steps 1 to 2 of the above procedure.

- Select Automatic setting.**
[Up Arrow] → [STORE]
 - Press STORE.**
• The clock is set automatically.
- Notes:**
- The clock operates for at least 60 minutes by its backup system in the event of power failure.
 - When the item "Automatic clock-set is" is ON on screen display, Automatic time correcting function is activated every day. The Automatic time correcting function is only activated when the power is off. This function is not activated during timer recording standby mode.

Settings Using On Screen Display

Preparations

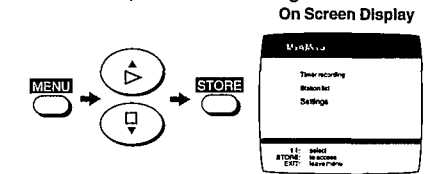
- Confirm that the TV is on and the VCR viewing channel is selected.
- Turn on the VCR.



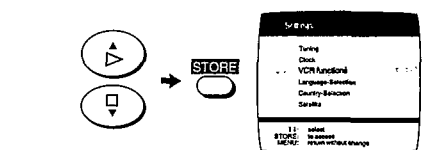
VCR functions

On Screen Display

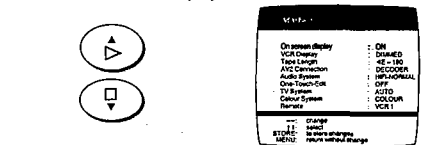
1 Press MENU, and then select Settings.



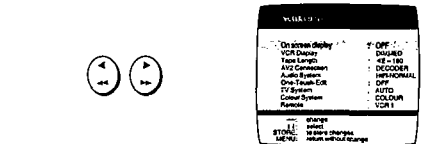
2 Select VCR functions.



3 Select On screen display.

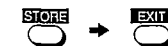


4 Select ON or OFF.



ON: The On Screen Display will appear on the TV screen by pressing OSD.
OFF: The On Screen Display will not appear even if OSD is pressed.

5 Press STORE, and then press EXIT to make On Screen Display disappear.



VCR Display

Follow steps 1 and 2 on page 47.

3 Select VCR Display.



4 Select ON, OFF or DIMMED.



- ON: When VCR is turned off, the characters are lit in the VCR display.
 OFF: When VCR is turned off, the characters are not lit in the VCR display.
 DIMMED: When VCR is turned off, the characters are dimmed in the VCR display.

5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.



To select the Corresponding Cassette Tape Length for Displaying the Approximate Remaining Tape Time

Follow steps 1 and 2 on page 47.

3 Select Tape Length.

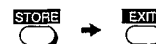


4 Select the corresponding cassette tape length.

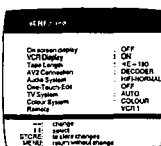
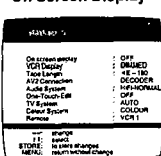


- ◀ E-180: For E30, -60, -90, -120 and -180 tapes.
 E-195: For E195 tape.
 E-240: For E240 tape.
 E-260 ▶: For E260 and -300 tapes.
 •The times displayed may differ depending on the tape used.

5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.



On Screen Display



AV2 Connection

Follow steps 1 and 2 on page 47.

3 Select AV2 Connection.



4 Select EXT or DECODER.



- EXT: When another VCR or a satellite receiver is connected to the AV2 (DECODER/EXT) socket.
 DECODER: When the decoder is connected to the AV2 (DECODER/EXT) socket.
 If Satellite connection is set to AV2 (See page 24.), AV2 Connection is set to EXT automatically.

5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.



Audio System

Follow steps 1 and 2 on page 47.

3 Select Audio System.

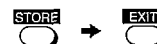


4 Select HI-FI-NORMAL or HI-FI-MIX.



- HI-FI-NORMAL: Normally set at this position to reproduce the better sound available from the Hi-Fi track.
 HI-FI-MIX: Both sound tracks (the Hi-Fi sound track and the normal sound track) are played back mixed together. Use this setting when playing back a cassette tape which has been insert edited or audio dubbed.

5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.



One-Touch-Edit

Follow steps 1 and 2 on page 47.

3 Select One-Touch-Edit.



4 Select ON or OFF.



- ON: For One-Touch-Editing.
 OFF: For editing with editing controller or synchronized editing.

5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.

To set the Colour TV System

Follow steps 1 and 2 on page 47.

3 Select TV System.



4 Select AUTO, PAL or MESECAM.



- Set according to the colour TV system used during playback or external recording.

5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.



Colour System

Follow steps 1 and 2 on page 47.

3 Select Colour System.



4 Select COLOUR or B/W.



- COLOUR: Normally set at this position.
 B/W: When playing back a tape which was recorded on black and white.

5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.



Remote Control Mode

Follow steps 1 and 2 on page 47.

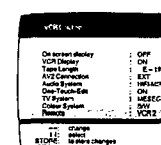
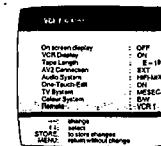
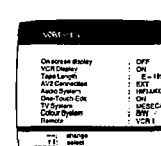
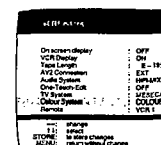
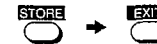
3 Select Remote.



4 Select VCR 1 or VCR 2.

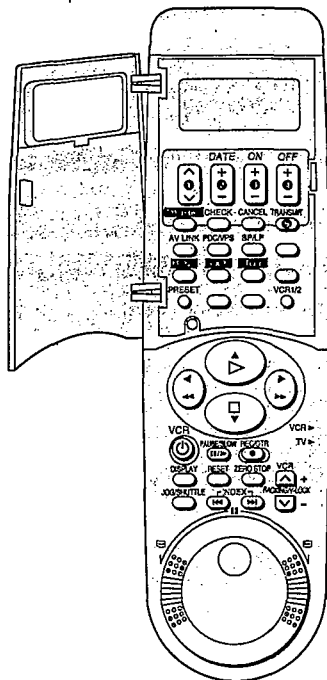


- VCR 1: Set to this position on both the VCR and remote controller for normal use with one VCR.
 VCR 2: Set to this position when using two Panasonic VCRs.
 This allows to operate VCR1 or VCR2 with remote controller.
 •When changing the remote control mode, please be sure to press **STORE**. And then press **VCR 1/2** to change the remote control mode of the remote controller. If this is not done, it will not be possible to operate the VCR using the remote controller.
 5 Press **STORE**, and then press **EXIT** to make On Screen Display disappear.

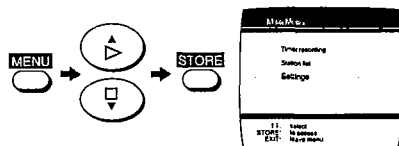


Language-Selection

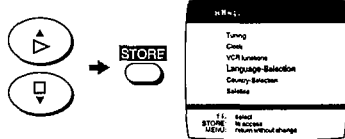
To change the language setting for On Screen Display, follow the steps below.



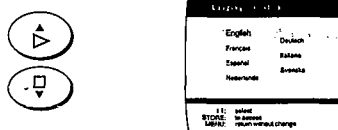
1 Press MENU, and then select Settings.



2 Select Language-Selection.



3 Select the desired language.

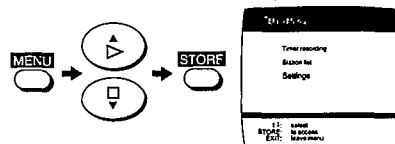


4 Press STORE, and then press EXIT.

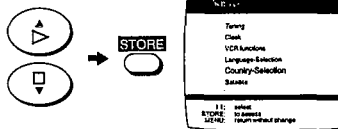
Country-Selection

To change the country setting, follow the steps below.

1 Press MENU, and then select Settings.



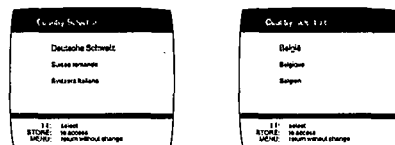
2 Select Country-Selection.



3 Select the desired country.



•When Switzerland or Belgium has been selected, operation moves to the screen which follows. Select the desired item.

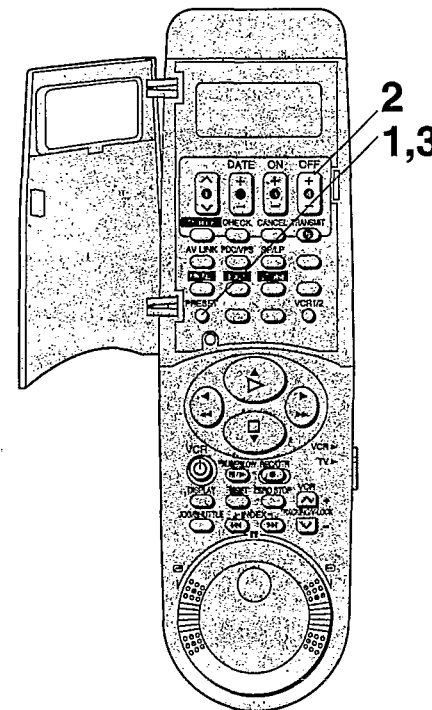


4 Press STORE, and then press EXIT.



Setting the Remote Controller for Operation of your TV

You can operate some TV manufacturers (see next page) using the supplied Remote Controller after this setting up.



Preparation

Turn on the TV.

Operations

Display Symbols

1 Keep PRESET pressed for more than 2 seconds.



2 Press OFF several times.



•When the number matches the manufacturer of your TV, the TV's power is turned off. Read through the information on the following page as well.

3 Press PRESET.



•The remote controller display changes as shown.

How to change the number

Each time the "+" side of OFF is pressed, the number is counted up by one as follows:

→ 1→2→3...30

When the "-" side is pressed, the number is counted down by one in the reverse order to that indicated above.

Note:

Some TV models cannot be operated using this remote controller.

Number	Manufacturer
1-4	Panasonic
5	GRUNDIG, Blaupunkt, SIEMENS
6	PHILIPS, LOEWE, SAMSUNG, RADIOLA, DUAL, PYE, BUSH, GOODMANS, ELEMIS, CURTIS, SBR
7	SONY
8	METZ
9	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA
10	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS
11	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA
12	FERGUSON, TELEFUNKEN, GOODMANS, SABA
13	TELEFUNKEN
14	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA
15	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA, NORDMENDE, BRANDT
16	TELEFUNKEN
17, 18	HITACHI
19	SIEMENS
20	SAMSUNG
21	ITT, NOKIA, SELECO
22	NOKIA, SALORA
23	MIVAR
24	TOSHIBA
25	SANYO
26	SHARP
27	JVC
28	MITSUBISHI
29, 30	HITACHI

When a TV manufacturer has the plural number
For example, When the number is 1, 2, 3 or 4 (Panasonic):

When the TV's power is turned off in step 2 on previous page, turn it back on and adjust the TV's volume using this remote controller. The volume can be adjusted if the number matches the TV manufacturer. If it is not possible to adjust the TV's volume, try setting the number (1 to 4) to match the TV manufacturer again until the volume can be adjusted.

Note:

FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SIEMENS, SAMSUNG, NOKIA, SABA and HITACHI have plural numbers. Although some models may operate with any of these numbers, other models may operate with only one number. Check each number in turn, and set the optimal number.

Precautions

Please read these cautions before you operate this VCR.

Avoid Sudden Changes in Temperature

If the VCR is suddenly moved from a cold place to a warm place, condensation may form on the tape and inside the VCR.

Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

Keep away from High Temperature

Keep the VCR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

Keep Magnets away

Never bring a magnet or magnetized object near the VCR because it will adversely affect the performance of the VCR.

No Fingers or Other Objects Inside

Touching internal parts of this VCR is dangerous, and may cause serious damage to the VCR. Do not attempt to disassemble the VCR. There are no user serviceable parts inside.

Keep Water away

Keep the VCR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VCR, serious damage could occur. If you spill any liquid into the VCR, consult qualified service personnel.

Lightning

To avoid damage by lightning, disconnect the aerial plug from the VCR.

Cleaning the VCR

Wipe the VCR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

Stacking

Place the VCR in a horizontal position, and do not place anything heavy on it.

Video Head Clogging

The video heads place picture signals on the tape during recording and read picture signals from the tape during playback and they are, therefore, of critical importance for the picture quality. If the VCR is used over extremely long periods of time, these heads may become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptom case occurs have the recorder checked by qualified service personnel.

Condensation may form in the VCR if:

- The VCR is in a room where the heater has just been turned on.
- The VCR is in a room with steam or high humidity.
- The VCR is brought from cold surroundings into a well-heated room.
- The VCR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

Note:

Do not operate the VCR for at least 1 hour if any of the above conditions occur.

This VCR does not incorporate a dew sensor.

SECTION 2 ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.

When reassembling, perform the steps in the reverse order.

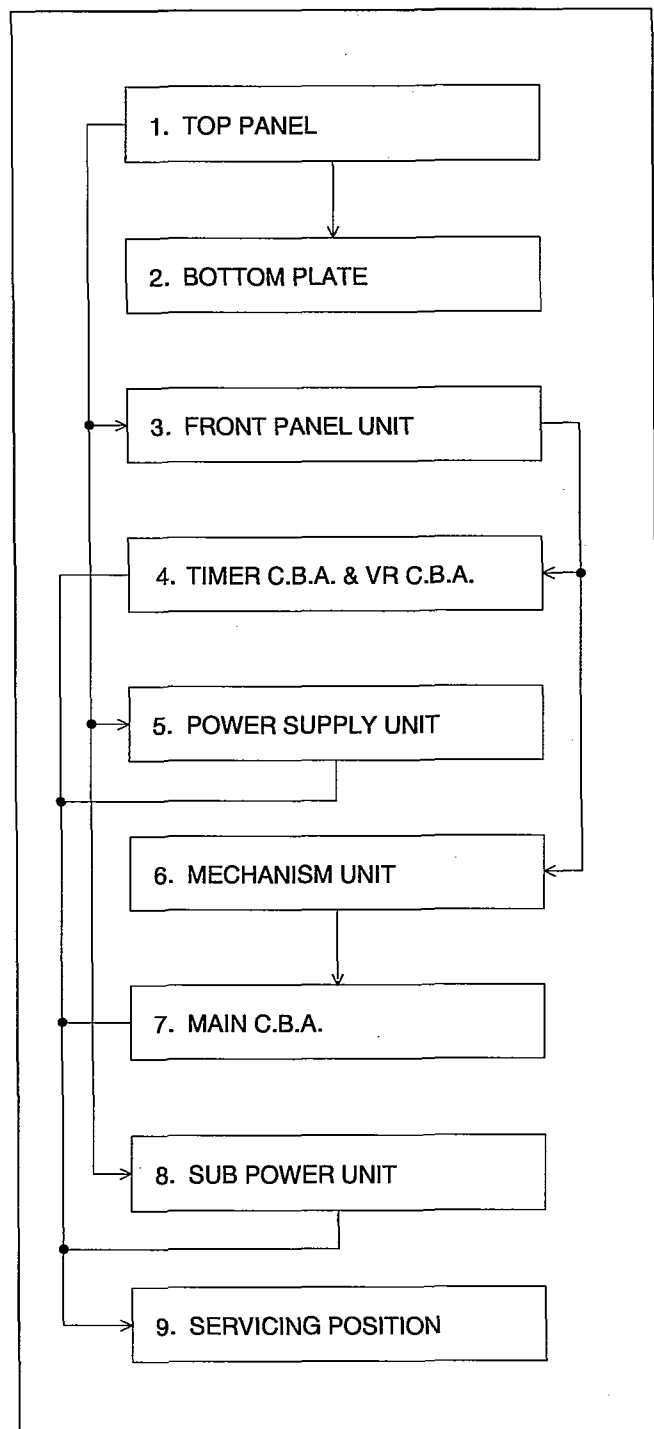


Fig. D1

2-1-2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Remove 4 Screws (A)

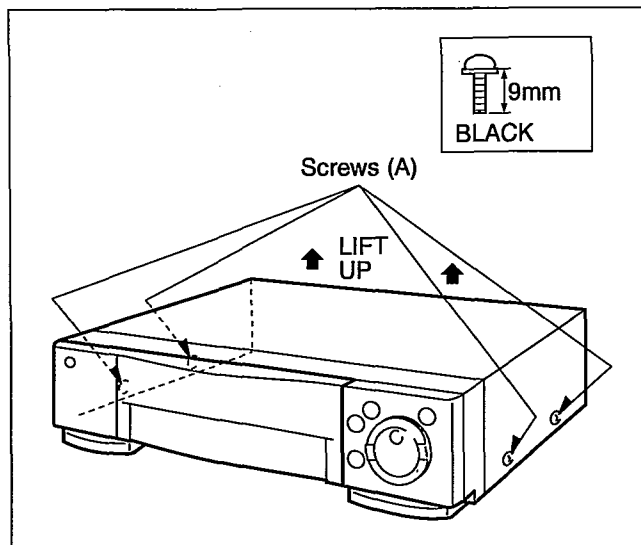


Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Unlock 6 tabs (B)

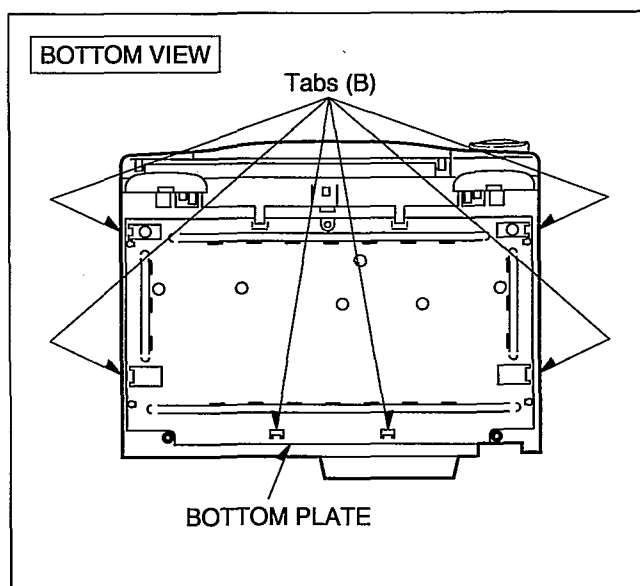


Fig. D3

3. REMOVAL OF THE FRONT PANEL UNIT

Pull out JOG & SHUTTLE Knob
Unlock 11 Tabs (C)

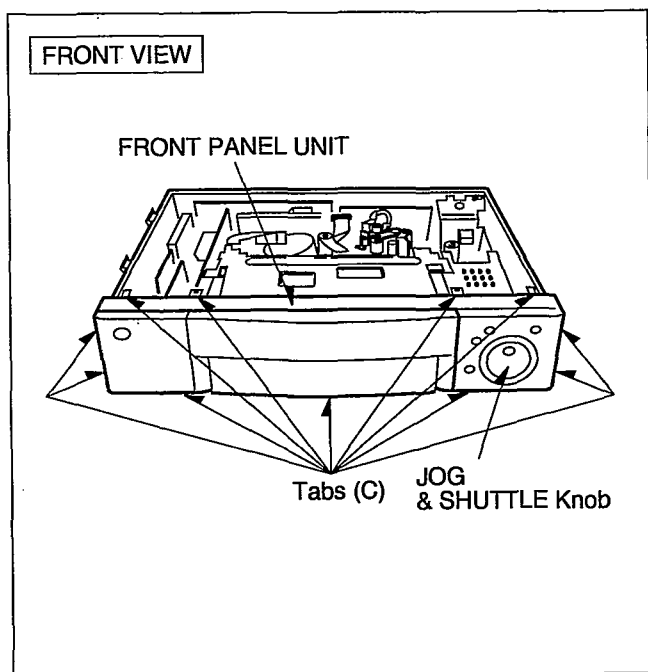


Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & VR C.B.A.

REMOVAL OF THE TIMER C.B.A.
Disconnect Bridge connector (D)
Unlock 5 Tabs (E)

REMOVAL OF THE VR C.B.A.
Disconnect Bridge connector (D)
Unlock 2 Tabs (F)

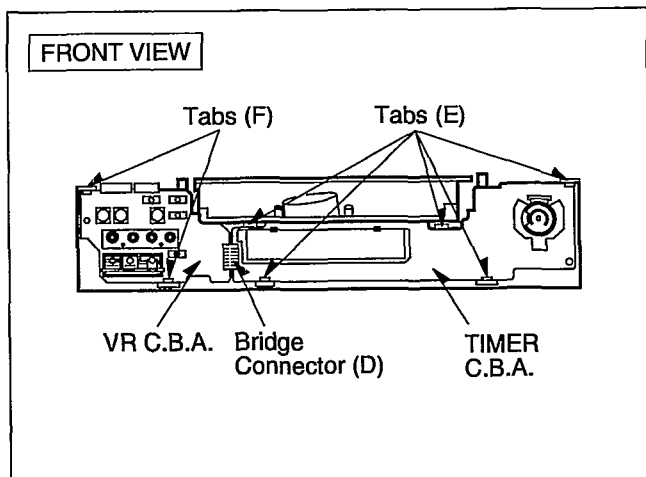


Fig. D5

5. REMOVAL OF THE POWER SUPPLY UNIT

Disconnect Bridge connector (G)
Unlock 5 Tabs (H)
Unlock 2 Tabs (I)

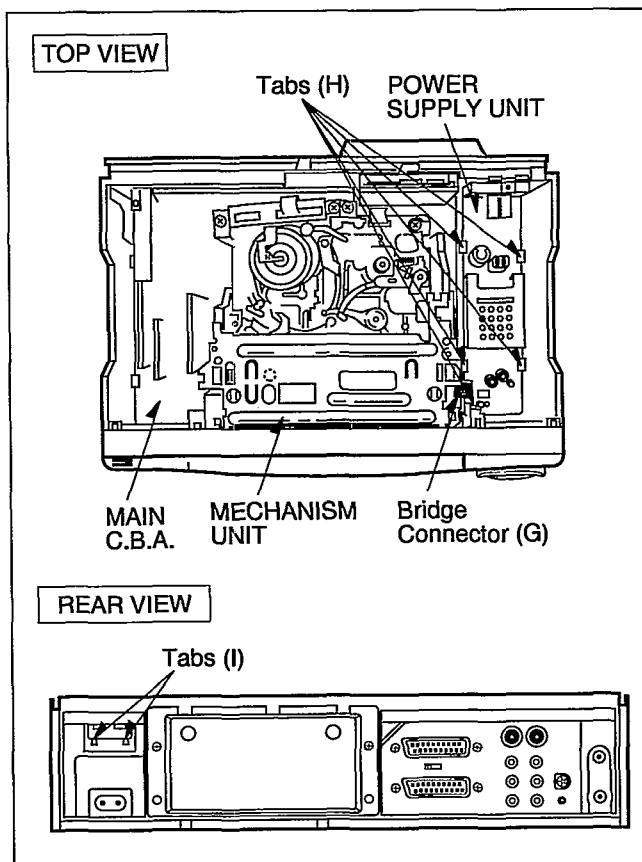


Fig. D6

CAUTIONS:

Please pay an attention to disconnect the connector (P1001-P1102) which connected between Main C.B.A. and Power supply unit as shown below.

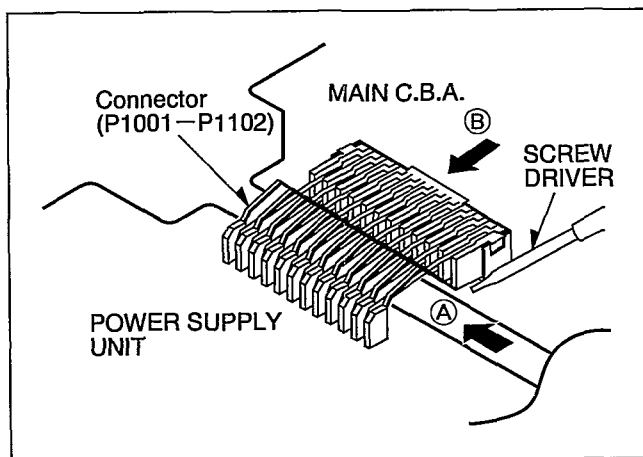


Fig. D7

As above drawing, disconnect the connector by SCREW DRIVER from the direction A.
Do not disconnect from direction B because it is possibility to damage the parts located by the connector.

6. REMOVAL OF THE MECHANISM UNIT

Remove 3 Screws (J)
Remove Screw (K)

7. REMOVAL OF THE MAIN C.B.A.

Disconnect ... Bridge connector (G) [Fig. D6]
Remove 3 Screws (L)
Unlock 5 Tabs (M)

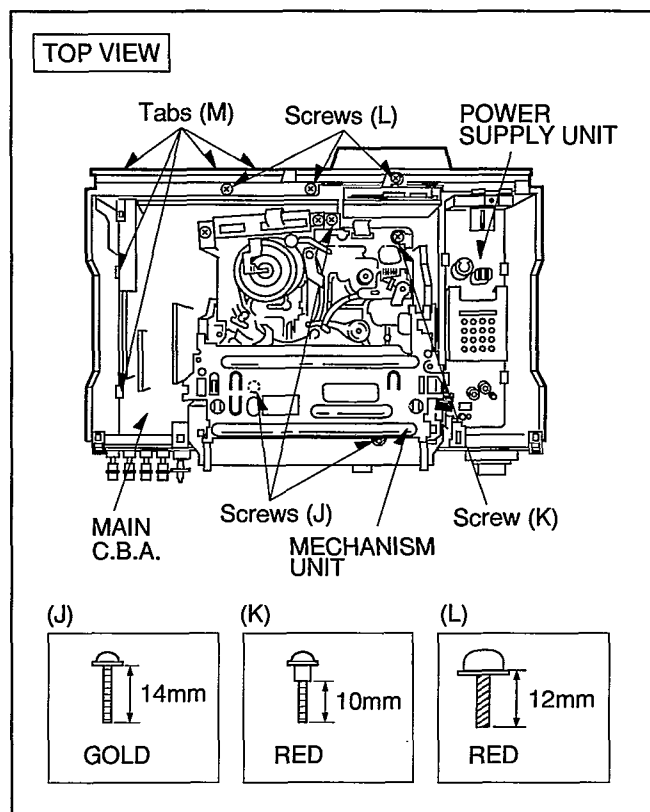


Fig. D8

8. REMOVAL OF THE SUB POWER UNIT

Remove 2 Screws (N)
Unlock 5 Tabs (O)

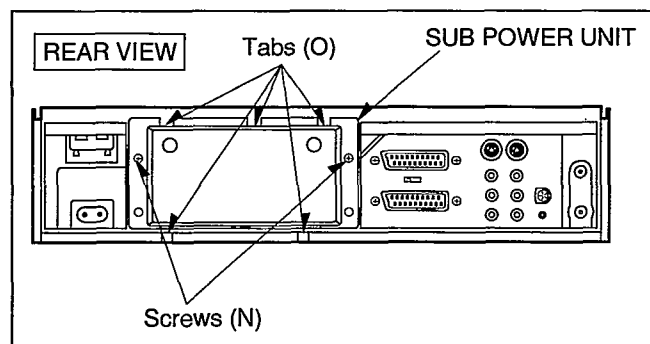


Fig. D9

9. SERVICING POSITION

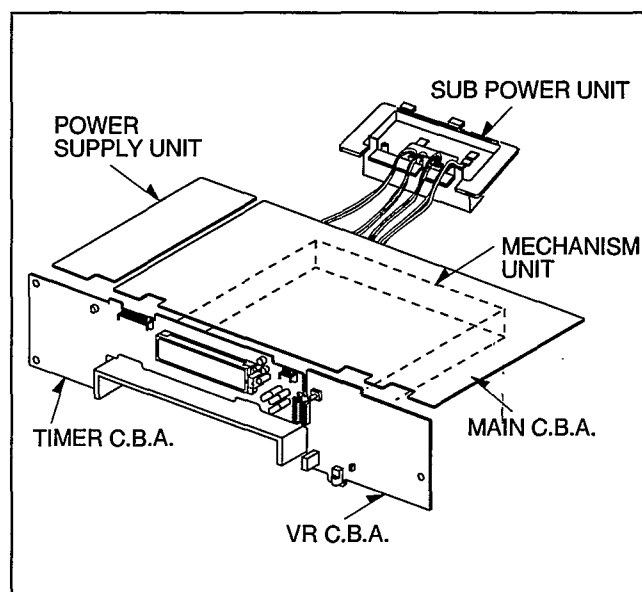


Fig. D10

2-2. MECHANICAL ADJUSTMENT PROCEDURES

The mechanical chassis of this model is the K Mechanical Chassis.

Therefore refer to the Service Manual for K Mechanical Chassis. (Order No. VRD9307M131)

CAUTIONS:

To make a Adjustment Mode for Tape Interchangeability, there are two ways to turn off the Auto Tracking.

- (1) Connect a jumper wire between TL SERV and GND as shown Location of Test Points & Controls (Page: 2-4).
- (2) Turn the Shuttle Ring to FF then push the EJECT button 3 times to set the Service Mode 2.

2-3. DISASSEMBLY PROCEDURES OF MECHANISM

The mechanical chassis of this model is the K Mechanical Chassis.

Therefore refer to the Service Manual for K Mechanical Chassis. (Order No. VRD9307M131)

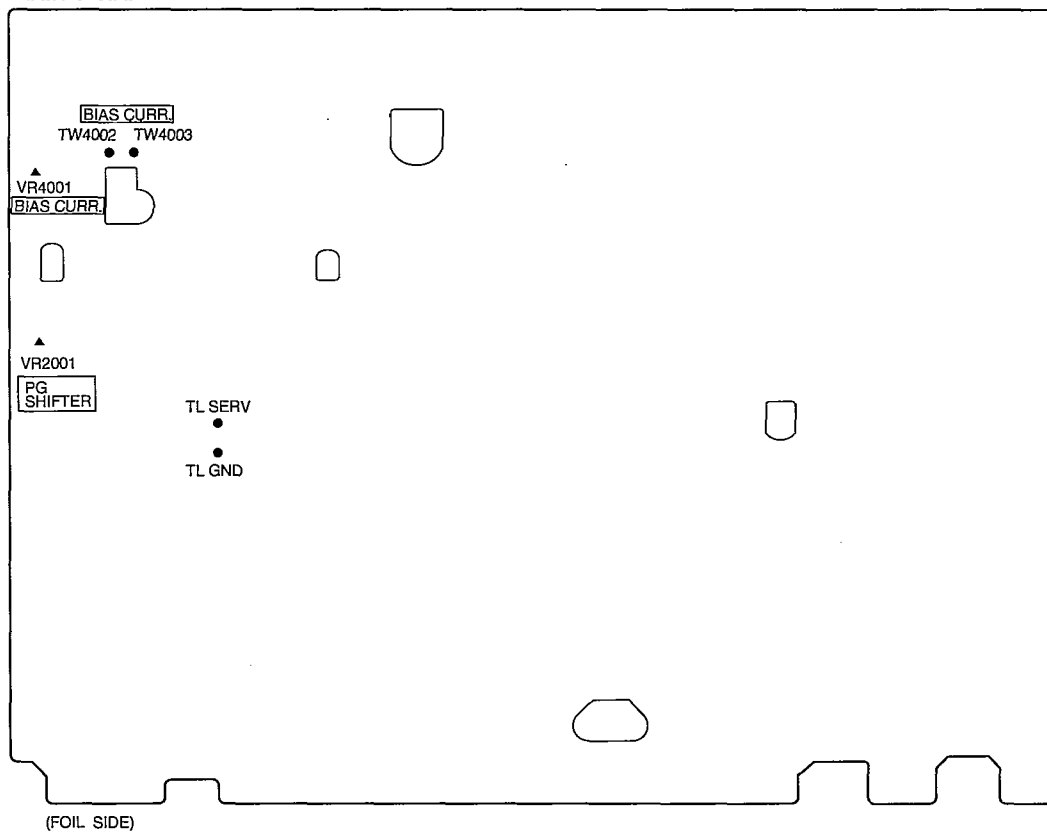
2-4. ASSEMBLY PROCEDURES OF MECHANISM

The mechanical chassis of this model is the K Mechanical Chassis.

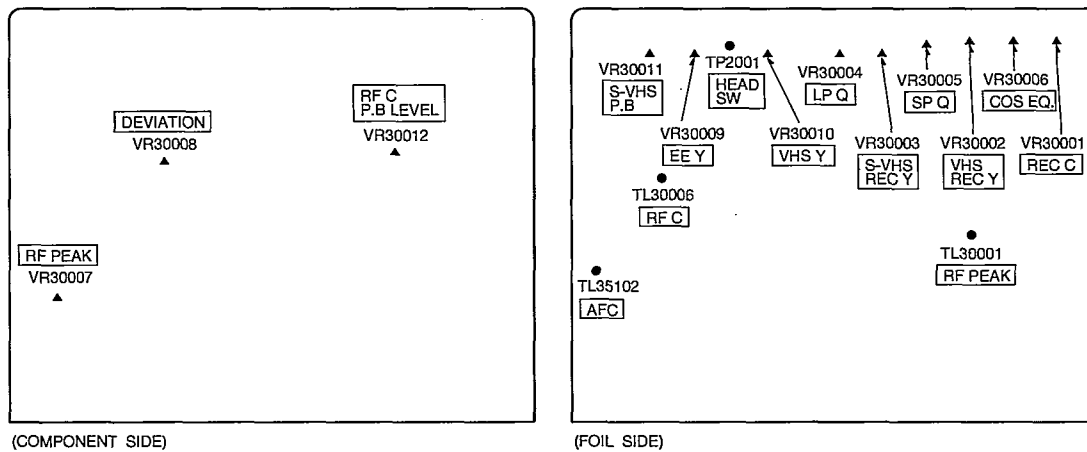
Therefore refer to the Service Manual for K Mechanical Chassis. (Order No. VRD9307M131)

LOCATION OF TEST POINTS & CONTROLS

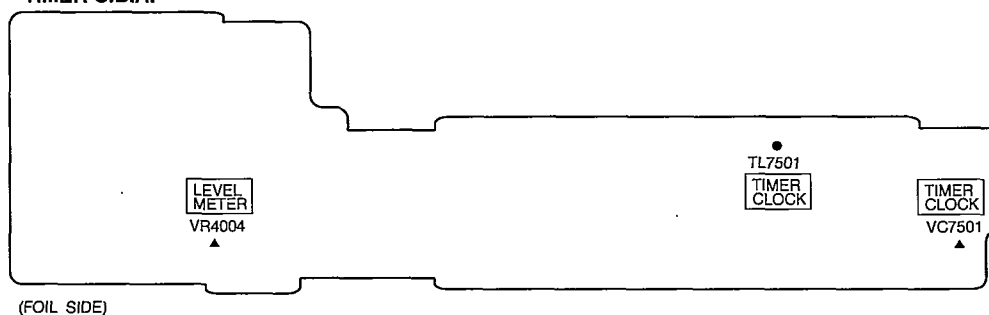
MAIN C.B.A.

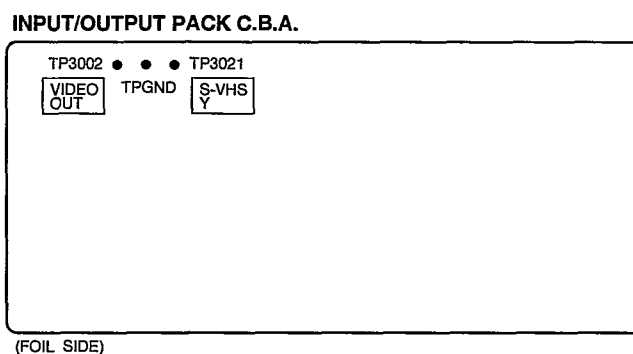
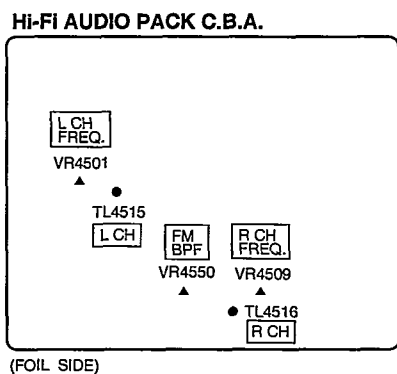
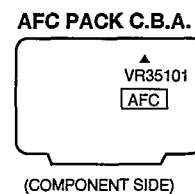
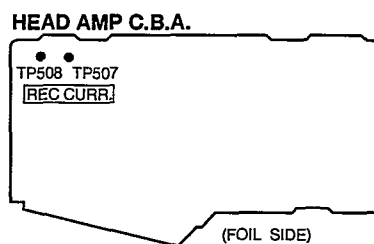
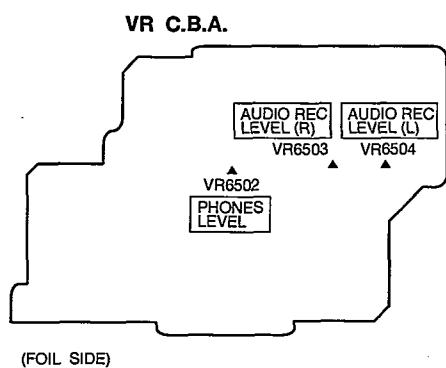


ANALOGUE LUMINANCE & CHROMINANCE PACK C.B.A.

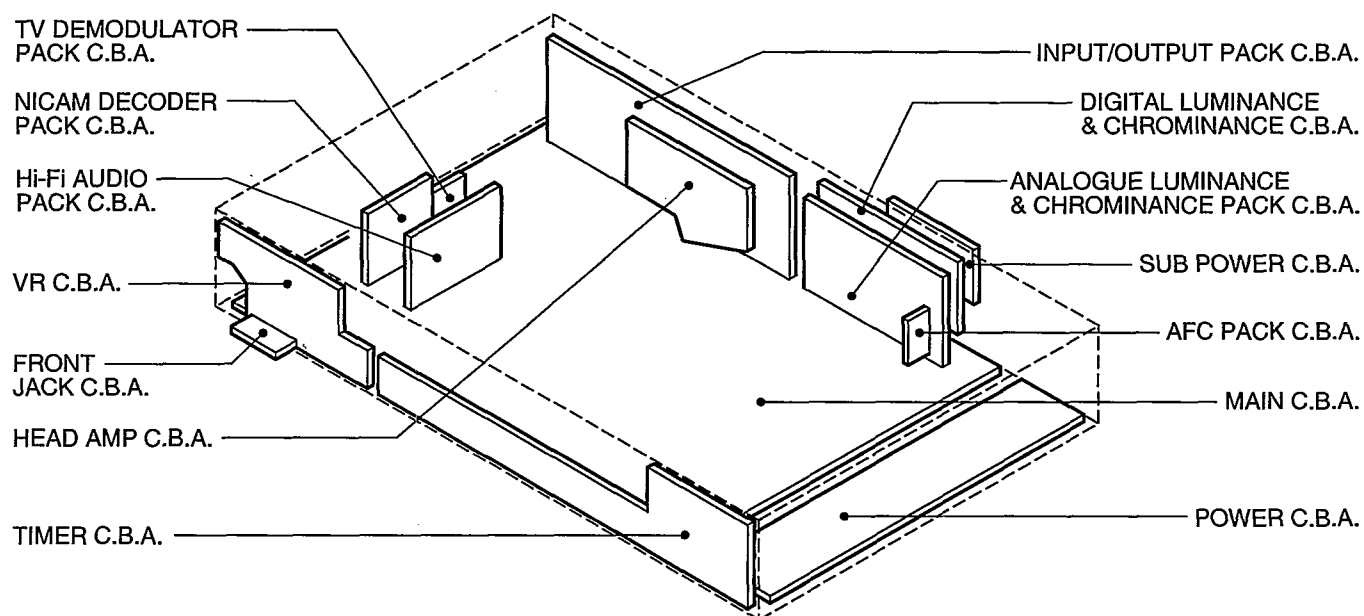


TIMER C.B.A.





CIRCUIT BOARD LAYOUT



2-3. ELECTRICAL ADJUSTMENT PROCEDURES

2-3-1. TEST EQUIPMENT

The following equipments are required for Electrical Adjustments.

1. Dual-Trace Oscilloscope • Voltage Range: 0.005~5 V/div • Frequency Range: DC~35 MHz • Probes: 10:1/1:1	3. Universal Counter	8. Monitor TV
	4. Digital Volt Meter (D.V.M.)	9. DC Power Supply
	5. Video Sweep generator	10. VHS/S-VHS Blank tape
2. Frequency Counter • Frequency Range: 0~10 MHz • Probes: 1:1	6. Sinewave Generator	11. VHS Alignment Tape • Part No.: VFJ8125H3F (PAL) • Part No.: VFM8080HQFP (NTSC)
	7. Video Pattern Generator	

2-3-2. VCR SETTING

When no indication in the procedure, set each selector as follows.

1. AV OUT SW : NORMAL	4. EDIT SW : OFF	7. HEAD PHONE VR : CENTRE FIX
2. AV3 SELECT SW : FRONT	5. S-VHS SW : ON	8. AUDIO REC VR (L, R) : CENTRE FIX
3. TBC SW : ON	6. 3D DNR SW (CVC SW) : ON	

2-3-3. ADJUSTMENTS

ITEM	TP	ADJ.	MODE	INPUT	TAPE	M. EQ.	SPEC.	REMARKS
PG SHIFTER ADJUSTMENT	TP2001 TP3002	VR2001	PLAYBACK	—	ALIGNMENT TAPE (PAL)	OSCILLO- SCOPE	9.0+—0.5 (H) (See Fig. E1)	Set the TBC SW to OFF position.
VIDEO EE LEVEL ADJUSTMENT	TP3002	VR30009	STOP	PAL COLOUR BAR	—	OSCILLO- SCOPE	2.0+—0.1 (Vp-p) (See Fig. E2)	1. This adjustment has to be done before adjusting VHS and S-VHS PLAYBACK LEVEL ADJUSTMENT. 2. AV1 VIDEO OUT must be 75 ohm terminated.

ITEM	TP	ADJ.	MODE	INPUT	TAPE	M. EQ.	SPEC.	REMARKS
RECORDING CURRENT ADJUSTMENT	TP507 (HOT) TP508 (GND)	VR30002 (VHS Y) VR30003 (S-VHS Y) VR30001 (C)	RECORDING	PAL COLOUR BAR	S-VHS BLANK TAPE	OSCILLO- SCOPE	Y (VHS/S-VHS) : 140+—5 (mVp-p) C: 21+—2 (mVp-p) (See Fig. E3/E4)	1. Set the CVC SW to OFF position. 2. Connect a jumper wire between pin 96 of IC6001 and GND (TEST MODE). 3. Before adjusting the Chrominance level, rotate VR30003 until Luminance signal is minimum to eliminate Luminance component. 4. When adjusting S-VHS luminance level, set S-VHS SW to ON position. 5. When adjusting VHS luminance level, set S-VHS SW to OFF position. 6. Adjust Luminance level until the peak level of V-SYNC is 140+—5mVp-p (VHS and S-VHS MODE). 7. Disconnect the jumper wire.
S-VHS PLAYBACK LEVEL ADJUSTMENT	TP3002	VR30011	PLAYBACK (SELF REC.)	PAL COLOUR BAR	S-VHS BLANK TAPE	OSCILLO- SCOPE	2.0+—0.1 (Vp-p) (See Fig. E5)	1. Set the S-VHS SW to ON position. 2. Before this adjustment, VIDEO EE LEVEL and RECORDING CURRENT ADJUSTMENT must be done. 3. AV1 VIDEO OUT must be 75ohm terminated.
VHS LUMINANCE PLAYBACK LEVEL ADJUSTMENT	TP3002	VR30010	PLAYBACK (SELF REC.)	PAL COLOUR BAR	BLANK TAPE	OSCILLO- SCOPE	2.0+—0.1 (Vp-p) (See Fig. E6)	1. Set the S-VHS SW to OFF position. 2. Before this adjustment, VIDEO EE LEVEL, S-VHS PLAYBACK LEVEL and RECORDING CURRENT ADJUSTMENT must be done. 3. AV1 VIDEO OUT must be 75ohm terminated.
RF CHROMINANCE PLAYBACK LEVEL ADJUSTMENT	TL30006	VR30012	PLAYBACK (SELF REC.)	PAL COLOUR BAR	BLANK TAPE	OSCILLO- SCOPE	1.2+—0.1 (Vp-p) (See Fig. E7)	1. Set the S-VHS SW to OFF position. 2. AV1 VIDEO OUT must be 75ohm terminated. 3. Before this adjustment, RECORDING CURRENT ADJUSTMENT must be done. 4. Adjust VR30012 until Cyan level is 1.2+—0.1 (Vp-p).
DEVIATION ADJUSTMENT	TP3002	VR30008	PLAYBACK (SELF REC.)	PAL COLOUR BAR	BLANK TAPE	OSCILLO- SCOPE	2.0+—0.1 (Vp-p) (See Fig. E8)	1. Before this adjustment, VHS and S-VHS PLAYBACK LEVEL ADJUSTMENT must be done. 2. Supply colour bar signal. 3. Connect the oscilloscope to VIDEO OUT. 4. Record the colour bar signal and adjust VR30008 during recording. 5. Playback the just recorded portion and confirm PLAYBACK DEVIATION level is 2.0+—0.1Vp-p (Unterminated). If the signal level is out of the specification, repeat item 3 and item 4 until the signal becomes the specification.
VHS FREQUENCY RESPONSE ADJUSTMENT	TP3002	VR30005 (SP) VR30004 (LP)	SP/LP PLAYBACK (SELF REC.)	VIDEO SWEEP SIGNAL (Shown in Fig. E9)	BLANK TAPE	OSCILLO- SCOPE/ VIDEO SWEEP GENERATOR	SP: 0+—1 (dB)(90—110%) LP: 0+—1 (dB)(90—110%) (See Fig. E10)	1. Set Video Sweep Signal as shown in Fig. E9 and supply video sweep signal to S-VHS IN terminal. 2. Set the video mode to B/W mode by using Menu mode in OSD. 3. Set the S-VHS SW to OFF position.

ITEM	TP	ADJ.	MODE	INPUT	TAPE	M. EQ.	SPEC.	REMARKS
RF PEAK FREQUENCY ADJUSTMENT	TL30001	VR30007	STOP	VIDEO SWEEP SIGNAL (Shown in Fig. E12) TL30007	—	OSCILLO- SCOPE/ VIDEO SWEEP GENERATOR	SIGNAL LEVEL AT 7MHz POSITION IS MAXIMUM	1. Connect the Service circuit as shown in Fig. E11. 2. Set VR30006 to centre position. 3. Set video sweep signal generator (video signal only) as shown in Fig. E12. 4. Supply set up video sweep signal to TL30007 via Service circuit. 5. Adjust VR30007 until the signal level at 7MHz portion is maximum as shown in Fig. E13.
S-VHS FREQUENCY RESPONSE ADJUSTMENT	TP3021	VR30006	PLAYBACK (SELF REC.)	VIDEO SWEEP SIGNAL (Shown in Fig. E14)	S-VHS BLANK TAPE	OSCILLO- SCOPE/ VIDEO SWEEP GENERATOR	-4.5+/-1 (dB)(55-70%) (See Fig. E15)	1. Before this adjustment, RF PEAK ADJUSTMENT must be done. 2. Set Video Sweep Signal as shown in Fig. E14 and supply video sweep signal to S-VHS IN terminal. 3. Set the video mode to B/W mode by using Menu mode in OSD. 4. Set the S-VHS SW to ON position.
AFC FREQUENCY ADJUSTMENT	TL35102	VR35101	STOP	—	—	FREQUENCY COUNTER	15625+/-50 (Hz)	Connect a jumper wire between TL35101 and GND.
BIAS CURRENT ADJUSTMENT	TW4002 (HOT) TW4003 (GND)	VR4001	RECORDING	—	BLANK TAPE	V.T.V.M.	2.8+/-0.1 (mVrms)	Set the S-VHS SW to OFF position.
CARRIER FREQUENCY ADJUSTMENT	TL4515 (L) TL4516 (R)	VR4501 (L) VR4509 (R)	RECORDING or STOP	—	BLANK TAPE	FREQUENCY COUNTER	L CH: 1.4+/-0.003 (MHz) R CH: 1.8+/-0.003 (MHz)	
FM B.P.F ADJUSTMENT	TL4515 (L) TL4516 (R)	VR4550	PLAYBACK	SINEWAVE 1.608MHz/ 400mVp-p PK4502-5	BLANK TAPE	V.T.V.M. SINEWAVE GENERATOR	L CH (TL4515)= R CH (TL4516)	1. Disconnect P502 (from MAIN C.B.A. to HEAD AMP C.B.A.). 2. The GND lead of oscilloscope must be connected to GND on HIFI AUDIO PACK C.B.A. to reduce the noise. 3. Supply the sinewave signal (1.608MHz/400mVp-p) to PK4502-5. 4. Adjust the level of the difference between Lch and R ch is equal. 5. After this adjustment, connect P502.
LEVEL METER SENSITIVITY ADJUSTMENT	LEVEL METER ON THE FIP	VR4004	STOP	SINEWAVE 1kHz/-6dB (AUDIO IN (L), (R))	—	V.T.V.M. SINEWAVE GENERATOR	0dB INDICATOR ON AUDIO LEVEL METER JUST LIGHTS UP	1. Select Stereo mode. (Both left and right indicators on the FIP are lit.) 2. Before adjusting, adjust HIFI REC VR until the signal level at Audio output terminals is 400mVrms.
TIMER REF. CLOCK ADJUSTMENT	TL7501	VC7501	STOP	—	—	UNIVERSAL COUNTER	7812.5+/-0.015 (usec)	

2-3-4. FIGURES

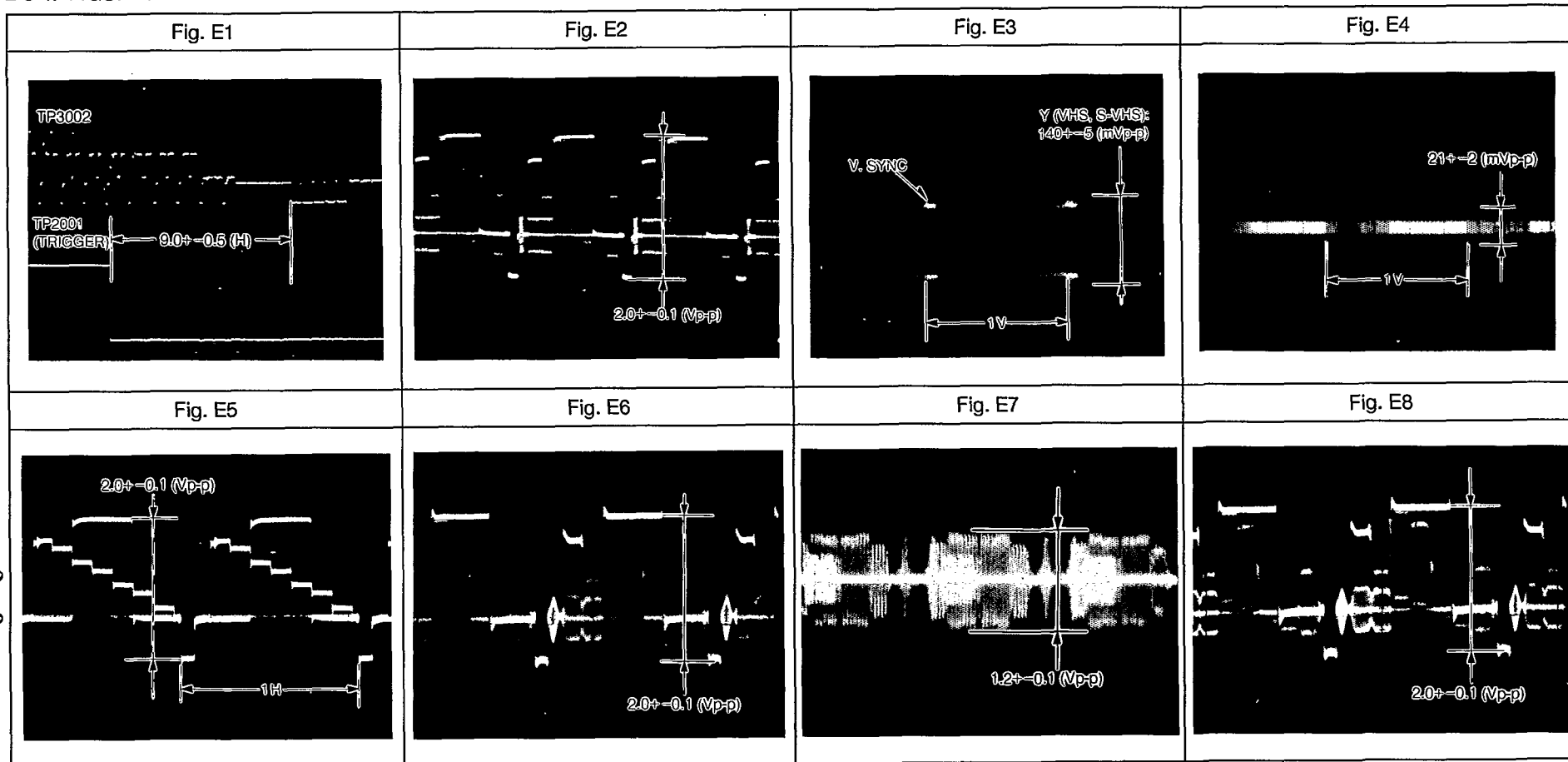
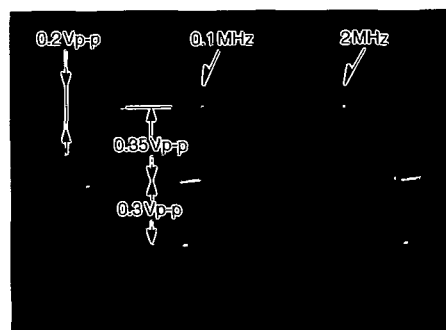


Fig. E9



CONDITION: BURST SIGNAL OFF
75 ohm TERMINATED

Fig. E10

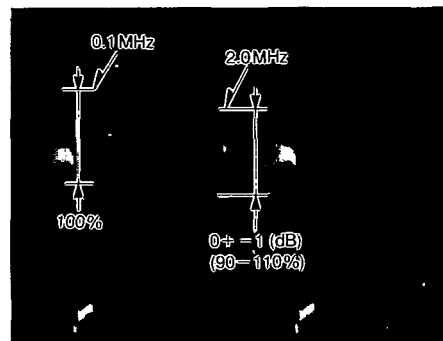
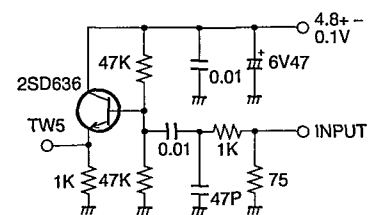


Fig. E11



(Example)
75 ohm: ERDS2TJ750 0.01 μ : ECCF1H103ZF
1 Kohm: ERDS2TJ102 47 P: ECCF1H470JC
47 Kohm: ERD2TJ473 6V47 μ : ECEA0JK470

Fig. E12

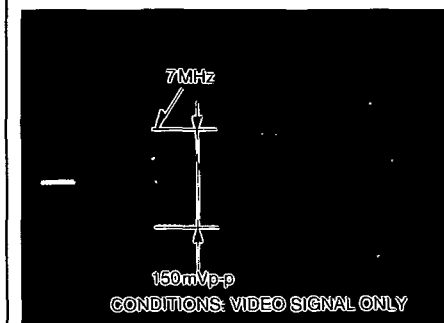


Fig. E13

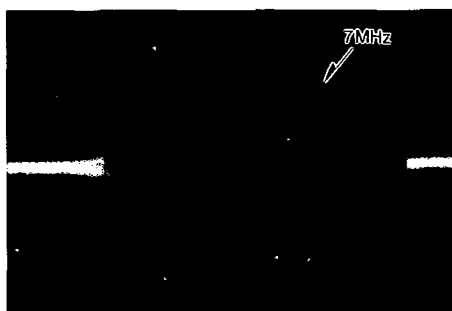
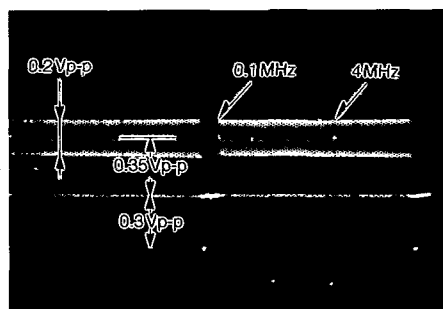
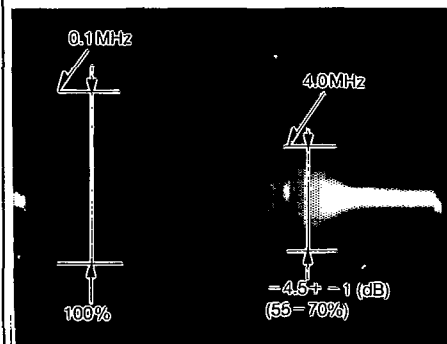


Fig. E14



CONDITION: BURST SIGNAL OFF
75 ohm TERMINATED

Fig. E15



SECTION 3

BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

3-1. ABBREVIATIONS

443NT [L]	4.43 NTSC ①	BIL	BILINGUAL
A. COMP	AUDIO COMPONENT SIGNAL	BIL [L]	BILINGUAL ①
A. COMPO	AUDIO COMPONENT SIGNAL	BIL. [H]	BILINGUAL ②
A. D.P [L]	AUDIO DUBBING PAUSE ①	BIL/M1 [L]	BILINGUAL ③
A. D/L [L]	AUDIO DUBBING PAUSE ①	BS CLOCK	BS CLOCK
A. DEF [S]	AUDIO DEFEAT	BS DATA	BS DATA
A. DEF [S] [L]	AUDIO DEFEAT	BS LCH IN	BS L CHANNEL INPUT
A. DUB P [L]	AUDIO DUBBING PAUSE ①	BS MIX [H]	BS MIX ④
A. DUB [H]	AUDIO DUBBING ⑤	BS MON [H]	BS MONITOR ⑥
A. ERASE	AUDIO ERASE	BS MONI [H]	BS MONITOR ⑦
A. H. SW	AUDIO HEAD SWITCHING PULSE	BS RCH IN	BS R CHANNEL INPUT
A. HEAD [R]	AUDIO HEAD (REC)	BS VIDEO	BS VIDEO SIGNAL
A. HEAD [W]	AUDIO HEAD (PLAY)	BS VIDEO/BS1	BS VIDEO SIGNAL
A. IN [L]	AUDIO INPUT (L)	BS [H]	BS ⑧
A. IN [R]	AUDIO INPUT (R)	BS. LEVEL	BS LEVEL
A. MUT [H]	AUDIO MUTE ⑨	BS. M [H]	BS MONITOR ⑩
A. MUTE [H]	AUDIO MUTE ⑨	BS/VTR [H]	BS/VTR ⑪
A. OUT [L]	AUDIO OUTPUT (L)	BUS CLK	BUS CLOCK
A. OUT [R]	AUDIO OUTPUT (R)	BUS LSN	BUS LISTEN
A. RF OUT	AUDIO RF SIGNAL OUTPUT	BUS TLK	BUS TALK
AVS/S. DATA	AV SW/SERIAL DATA	BUZZER	BUZZER
AC ONLINE	AC ONLINE	CAP EC	CAPSTAN TORQUE CONTROL
AC. O/EE. H	AC ONLINE/EE ⑫	CAP M GND	CAPSTAN MOTOR GND
AFC S C	AFC S CURVE	CAP. ET	CAPSTAN TORQUE CONTROL
AFC [S]	AFC S CURVE	CAP. FG1	CAPSTAN FG1 PULSE
AFC. DEF	AFC DEFEAT	CAP. FG2	CAPSTAN FG2 PULSE
ARFC OUT	AUDIO RF SIGNAL OUTPUT	CAS. SW	CASSETTE SW
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL	CCN	PLAYBACK CONTROL SIGNAL (-)
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI	CCP	PLAYBACK CONTROL SIGNAL (+)
	ARTIFICIAL VERTICAL SYNC SIGNAL ⑬/NORMAL	CHM	CONTROL SIGNAL (+)
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL ⑭/NORMAL	CHP	CONTROL SIGNAL (-)
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL	CINEM [L]	CINEMA ⑮
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE	CINEMA [L]	CINEMA ⑯
AUDIO IN [L]	AUDIO INPUT (L)	CINEMA/MIX	CINEMA/MIX
AUDIO IN [R]	AUDIO INPUT (R)	CKL	RATCH LOCK
AUDIO OUT [L]	AUDIO OUTPUT (L)	CKS	SHIFT LOCK
AUDIO OUT [R]	AUDIO OUTPUT (R)	CL	CLOCK
AUDIO SELECT [H]	AUDIO SELECT ⑰	CLK	CLOCK
AUDIO. L	AUDIO (L)	CLK (C.G)	CLOCK
AUDIO. R	AUDIO (R)	CLOCK. IN	CLOCK INPUT
AV CNT	AV CONTROL	CLP	CLAMP
AV CTL	AV CONTROL	COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK	COLOR [H]	COLOUR ⑱
AV. C.M.	AV CONTROL MODE	CONV	CONVERTOR
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)	CS	CHIP SELECT
AVSW/METER. L	AV SW/LEVEL METER (L)	CTL GND	CONTROL GND
B MODE. H	B MODE ⑲	CTL HEAD [H]	CONTROL HEAD (+)
B.G.P	BURST GATE PULSE	CTL HEAD [-]	CONTROL HEAD (-)
BACKUP 5V	BACK UP 5V	CTL [H]	CONTROL HEAD (+)
BAND. U.E.	BAND U	CTL [-]	CONTROL HEAD (-)
BANDVL. D	BAND VL	CUE BIAS	CUE BIAS
BI/MI [L]	BILINGUAL/MIX ⑳	CURRENT LIM	CURRENT LIMMITER
		CYL ET	CYLINDER TORQUE CONTROL

CYL GND	CYLINDER GND	FULL. E. 12V	FULL ERASE 12V
D.F.M. REC [H]	DELAIED FM RECORDING ⑥	GND [A]	GND (ANALOG)
D. FM REC [L]	DELAIED FM RECORDING ⑦	GND [TU]	GND (TUNER)
D. GND	DIGITAL GND	GND/N. SW. 12V	GND/NON SW 12V
D. REC [H]	DELAYED RECORDING ⑥	H. SYNC	HORIZONTAL SYNC
D4/S. LED	D4/STILL LED	H. AMP. SW	HEAD AMP SW PULSE
D4/STILLED	D4/STILL LED	H. P <R>	HEAD PHONE (R)
DAC [CLK]	TUNER DAC (CLOCK)	H. P <L>	HEAD PHONE (L)
DAC/FSCS	TUNER DAC/FS CHIP SELECT	H. P GND	HEAD PHONE GND
DAREC [H]	DELAYED AUDIO RECORDING ⑥	H. P OUT [L]	HEAD PHONE OUTPUT (L)
DATA	DATA	H. P OUT [R]	HEAD PHONE OUTPUT (R)
DECODER [L]	DECODER (L)	H. SW	HEAD SW PULSE
DECODER [R]	DECODER (R)	HEAD PHONE [L]	HEAD PHONE (L)
DEW	DEW	HEAD PHONE [R]	HEAD PHONE (R)
DEW SNS	DEW SENSOR	HEAD SW	HEAD SW
DFMRE [H]	DELAYED FM AUDIO RECORDING ⑥	HEATER [+]	HEATER (+)
E. REC 5V	EXCEPT RECORDING 5V	HEATER [-]	HEATER (-)
EC	ERROR TORQUE CONTROL	HSS	HORIZONTAL SYNC SIGNAL
ECR	ERROR TORQUE CONTROL	HTR [+]	HEATER (+)
	REFERENCE VOLTAGE	HTR [-]	HEATER (-)
EDT TRIG [L]	EDIT TRIGGER ⑦	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT ⑥	ICL	CONTROL AGC CIRCUIT
EE [H]	EE ⑥	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE ⑥/INSERT ⑥	IN SELA1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch ⑦
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT ⑥
ENVE. OUT	ENVELOPE OUTPUT	INSEL A1	INPUT SELECT A1 POSITION
ENVE. SEL	ENVELOPE SELECT	INSEL A2	INPUT SELECT A2 POSITION
ENV SELECT	ENVELOPE SELECT	INSERT	INSERT
EP [H]	LP ⑥	INSERT [H]	INSERT ⑥
EP/LP [H]	LP ⑥	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP ⑥	JOG S3 LED/FOWRD	JOG LED/FORWARD LED
EPROMCS	EPROM CHIP SELECT	JOG/F. LED	JOG LED/FORWARD LED
EX. REC 5V	EXCEPT RECORDING 5V	JSB [H]	JSB ⑥
FF/REW [L]	FIRST FORWARD/REWIND ⑦	JST. CLCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJUSTMENT	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON ⑥	L. CH [H]	Lch ⑥
FLY ON [H]	FLYING ERASE HEAD ON ⑥	L. CH [L]	Lch ⑦
FLY. E [H]	FLYING ERASE HEAD ON ⑥	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE ⑥	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE ⑥	LED (SUB)	LED (SUB)
FM OUT [L]	FM OUTPUT (L)	LED CKL	LED SERIAL CLOCK
FM OUT [R]	FM OUTPUT (R)	LED CKS	LED SERIAL CLOCK
FM PACK OUT [L]	FM PACK OUTPUT (L)	LED DATA	LED SERIAL DATA
FM PACK OUT [R]	FM PACK OUTPUT (R)	LINE IN 1 [L]	LINE INPUT 1 (L)
FM/BS SEL [L]	FM/BS SELECT (L)	LINE IN 1 [R]	LINE INPUT 1 (R)
FM/BS SEL [R]	FM/BS SELECT (R)	LINE IN 2 [L]	LINE INPUT 2 (L)
FS. CLK	FS CLOCK	LINE IN 2 [R]	LINE INPUT 2 (R)
FUL. E [H]	FULL ERASE HEAD ON ⑥	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON ⑥	LINE IN [L]	LINE INPUT (L)

LINE IN [R]	LINE INPUT (R)	P-OFF [H]	POWER OFF ⑨
LINE OUT [L]	LINE OUTPUT (L)	P-OFF [L]	POWER OFF ①
LINE OUT [R]	LINE OUTPUT (R)	P. FAIL	POWER FAILURE DETECT
LP [H]	LP ⑨	P. OFF [H]	POWER OFF ⑨
LPTRI [L]	LP TRICK PLAY ①	P. OFF [L]	POWER OFF ①
Lch/A. DUB	Lch/AUDIO DUBBING	PAL [H]	PAL ⑨
M GND	MOTOR GND	PAL [L]/NTSC [H]	PAL ①/NTSC ⑨
M REG	MOTOR REGULATOR	PB ADJ OUT	PLAYBACK ADJUST OUTPUT
MAIN OUT	MAIN OUTPUT	PB OUT	PLAYBACK OUTPUT
MAIN [L]	MAIN ①	PB. H	PLAYBACK ⑨
MAIN/MONO	MAIN/MONAUROAL	PFG	PG/FG
MAX IN	MAXIMAM INPUT	PHOTSN +B	PHOTO SENSOR +B
MES [H]	MESECAM ⑨	PICT. CNT	PICTURE CONTROL
MESE [H]	MESECAM ⑨	PLAY LED/RVS LED	PLAY LED/REVERSE LED
MESE [L]	MESECAM ①	PLAY. PO	PLAY POSITION
METER 5V	LEVEL METER 5V	PLAY/R. LED	PLAY LED/REVERSE LED
METER [L]	LEVEL METER (L)	PLY/DEW	PLAY/DEW ⑨
METER [R]	LEVEL METER (R)	POWER OFF [L]	POWER OFF ①
METER. L/AVS	LEVEL METER (L)	PREROLL [H]	PREROLL ⑨
METER. R/AVC	LEVEL METER (R)	PWRFAIL	POWER FAILURE DETECT
MI/BI [L]	MIX ⑨/BILIGUAL	R. CH [H]	Rch ⑨
MIC GND	MIC GND	R. CH [L]	Rch ①
MIC IN	MIC INPUT	R. ST	RESET
MIC IN [L]	MIC INPUT (L)	R/S/F	REVERSE ⑨/STOP ⑨/FORWARD ①
MIC IN [R]	MIC INPUT (R)	RCH [H]	Rch ⑨
MIC [H]	MIC ⑨	REC 12V	RECORDING 12V
MIX [H]	MIX ⑨	REC CHROMA	RECORDING CHROMINANCE SIGNAL
MIX [H]/CINEMA [L]	MIX ⑨/CINEMA SOUND ①	REC H	RECORDING ⑨
MIX/CINE	MIX ⑨/CINEMA SOUND ①	REC IN	RECORDING INPUT
MIX/CINEMA [L]	MIX ⑨/CINEMA SOUND ①	REC OUT [L]	RECORDING OUTPUT ①
MN. H/M. L	MONAUROAL ⑨/MAIN ①	REC START	RECORDING START
MN. H/MAI. L	MONAUROAL ⑨/MAIN ①	REC VR [C]	RECORDING VOLUME (COMMON)
MN2/MES. L	MONAUROAL 2/MESECAM ①	REC VR [L]	RECORDING VOLUME (L)
MODE SEL	AUDIO MODE SELECT	REC VR [R]	RECORDING VOLUME (R)
MODE SW	AUDIO MODE SW	REC Y	RECORDING LUMINANCE SIGNAL
MODE. S. IN	AUDIO MODE SELECT INPUT	REC [H]	RECORDING ⑨
MODE. S. OUT	AUDIO MODE SELECT OUTPUT	REC. C	RECORDING CHROMINANCE SIGNAL
MONO [H]	MONAUROAL ⑨	REC. Y	RECORDING LUMINANCE SIGNAL
MONO [H]/MAIN [L]	MONAUROAL ⑨/MAIN ①	REC/EE CTL	RECORDING/EE CONTROL
MONO2 [L]	MONAUROAL 2	REEL-T	REEL PULSE (TAKE-UP)
MONO2/MESE [FM(L)]	MONAUROAL 2/MESECAM (FM ①)	REEL-S	REEL PULSE (SUPPLY)
MOTOR GND	MOTOR GND	REGULATOR FILTER	REGULATOR FILTER
MUTE	MUTE	RESET	RESET
N. A. REC [L]	NORMAL AUDIO RECORDING	REV M F/R	REVIEW MOTOR
N. SW 12V	NON SW 12V		FORWARD/REVERSE
N. SW. 5. DET	NON SW 5V DETECT	REV M V1	REVIEW MOTOR V1
NICAM	NICAM	REV M V2	REVIEW MOTOR V2
NICAM [L]	NICAM ①	REV MOTOR F/R	REVIEW MOTOR
NOL [H]	PAL ⑨/4.43 NTSC ⑨/3.58 NTSC ①		FORWARD/REVERSE
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY ⑨	REV MOTOR V1	REVIEW MOTOR V1
NORMAL [H]	NORMAL ⑨	REV MOTOR V2	REVIEW MOTOR V2
NR BIAS	NR BIAS	REV MOTOR [+]	REVIEW MOTOR (+)
NTSC [L]	NTSC ①	REV MOTOR [-]	REVIEW MOTOR (-)
OCH	CONTROL AGC CIRCUIT	REV. M. GND	REVIEW MOTOR GND
OUT	OUTPUT	RF. CHROMA	RF CHROMINANCE SIGNAL

RF OUT	RF OUTPUT	SYSCON 5V	SYSTEM CONTROL 5V
RF Y	RF LUMINANCE SIGNAL	SYSTEM	SYSTEM SW
RF. Y. IN	RF LUMINANCE SIGNAL INPUT	T-PHOTO	TAKE-UP PHOTO TRANSISTOR
RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT	T-RL. PLS	TAKE-UP REEL PULSE
ROTAR. SW	ROTARY SW	T. BUSCLK	TIMER BUS CLOCK
ROTARY	ROTARY SW	T. BUSLSN	TIMER BUS LISTEN
RST	RESET	T. BUSTLK	TIMER BUS TALK
RST [L]	RESET ①	T. END [L]	TAPE END ①
Rch/INST	Rch/INSERT	T. PHOTO	TAKE-UP PHOTO TRANSISTOR
S IN	SERIAL DATA INPUT	TAPE END [L]	TAPE END ①
S OUT	SERIAL DATA OUTPUT	TAPE END [L]/CAM	TAPE END ①/CAMERA PAUSE
S-PHOTO	SUPPLY PHOTO TRANSISTOR	TEST	TEST MODE
S-RL. PLS	SUPPLY REEL PULSE	TPZ	TRAPEZOIDAL WAVE CIRCUIT
S. CLK	SERIAL CLOCK	TRIC [L]	TRIC PLAY ①
S. CLK/AV	SERIAL CLOCK/AV	TRICK [L]	TRIC PLAY ①
S. DATA	SERIAL DATA	TRK. ENV	AUTO TRACKING ENVELOPE DETECT
S. DATA/A	SERIAL DATA	TU. AUDIO	TUNER AUDIO
S. PHOTO	SUPPLY PHOTO TRANSISTOR	TU. GND	TUNER GND
S. TAB [L]	SAFETY TAB SW ON ①	TU. V. IN	TUNER VIDEO SIGNAL INPUT
S/P/N	SECAM/PAL/NTSC	TU. VIDEO	TUNER VIDEO
SC IN	SERIAL CLOCK INPUT	TUN NOR IN	TUNER NORMAL INPUT
SC OUT	SERIAL CLOCK OUTPUT	TUN R	TUNER AUDIO (R)
SCK SELECT	SERIAL CLOCK SELECT	TUN. AUDIO IN	TUNER AUDIO INPUT
SEL OUT [L]	SELECT OUTPUT (L)	TUNER 12V	TUNER 12V
SEL OUT [R]	SELECT OUTPUT (R)	TUNER L	TUNER AUDIO (L)
SHUTTLE 1	SHUTTLE 1	TUNER V IN	TUNER VIDEO SIGNAL INPUT
SIF	SOUND INTERMEDIATE FREQUENCY	TUNER [L]	TUNER AUDIO (L)
SLMUT [H]	INPUT SELECT MUTE ①	TUNER [N]	TUNER AUDIO (NORMAL)
SLNID [+]	SOLENOID (+)	TUNER [R]	TUNER AUDIO (R)
SLNID [-]	SOLENOID (-)	TUNER. 12	TUNER 12V
SLW TR. MM	SLOW TRACKING MONO MULTI	TUOFF [H]	TUNER OFF ①
SLW TR. REF	SLOW TRACKING REFERENCE	TV. AUDIO	TV AUDIO
	VOLTAGE	TV/VTR	TV/VTR
SNS. GND	SENSOR GND	TXTON [L]	TEXT ON ①
SOFT [H]	SOFT TAPE PLAY ①	U. REG45V	UNREGULATOR 45V
SOFT [H]/NORMAL	SOFT TAPE PLAY ①/NORMAL ①	UNREG	UNREGULATOR
SOLENOID ON [L]	SOLENOID ON ①	UNREG19V	UNREGULATOR 19V
SP [H]	SP ①	V. REF	REFERENCE VOLTAGE
SP/L/SLP	SP/LP	V. EE [H]	VIDEO EE ①
SSS [L]	SLOW/STILL/STOP	V. EE [L]	VIDEO EE ①
STEREO LED	STEREO LED	VCO REF	REFERENCE OSCILLATER
STEREO [H]	STEREO ①	VD. IN	VIDEO SIGNAL INPUT
STEREO [L]	STEREO ①	VD. OUT	VIDEO SIGNAL OUTPUT
STOP. PO	STOP POSITION	VIDEO EE [L]	VIDEO EE ①
STOP/5V	STOP POSITION/5V	VIDEO IN	VIDEO SIGNAL INPUT
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT	VIDEO OUT	VIDEO SIGNAL OUTPUT
STOP1/PAL:ST	STOP1 POSITION/PAL	VM	MOTOR VOLTAGE
STOP2. PO	STOP 2 POSITION	VM DOWN [L]	MOTOR VOLTAGE DOWN ①
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW	VSS	VERTICAL SYNC SIGNAL
STREO [H]	STEREO ①	VTR [H]	VTR ①
SUB BIAS	SUB BIAS	VTR. 12V	VTR 12V
SUB. SW	SUB SW	X IN	OSCILLATOR INPUT
SVHS CAS [L]	S-VHS CASSETTE ①	X OUT	OSCILLATOR OUTPUT
SW. 5. DET	SW 5V DETECT		
SYNC [L]	SYNC ①		

INPUT/OUTPUT CHART FOR IC6001

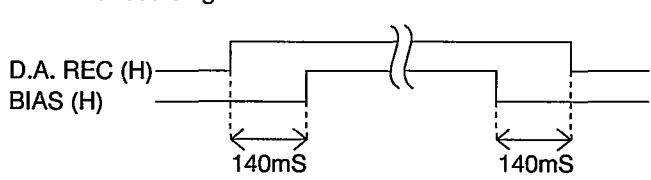
Pin Number	Input/Output	Port Name	Function																								
1	O	2H (H)	This port supplies the high signal in SP mode.																								
2	O	FM MUTE (H)	This port supplies the high signal in special playback (CUE, REV, SLOW, STILL) mode.																								
3	O	AUDIO MUTE (H)	This port supplies the high signal in special playback (CUE, REV, SLOW, STILL) mode.																								
4	O	MONO (H)	Compulsory monaural output. Monaural on : High Monaural off : Low																								
5	O	VIDEO EE (L)	EE/VV mode selection EE mode : Low VV mode : High																								
6	O	VA	Input Video Signal Selection. The input signal is selected with SAT (H) at pin 24.																								
7	O	VB	<table><tr><td>VCR IN</td><td>VA</td><td>VB</td><td>SAT</td></tr><tr><td>TUNER</td><td>L</td><td>L</td><td>L</td></tr><tr><td>AV1</td><td>H</td><td>L</td><td>L</td></tr><tr><td>AV2</td><td>L</td><td>H</td><td>L</td></tr><tr><td>AV3</td><td>H</td><td>H</td><td>L</td></tr><tr><td>SAT</td><td>L</td><td>L</td><td>H</td></tr></table>	VCR IN	VA	VB	SAT	TUNER	L	L	L	AV1	H	L	L	AV2	L	H	L	AV3	H	H	L	SAT	L	L	H
VCR IN	VA	VB	SAT																								
TUNER	L	L	L																								
AV1	H	L	L																								
AV2	L	H	L																								
AV3	H	H	L																								
SAT	L	L	H																								
8	O	V. CHANGE (H)	This port supplies high signal while the loading motor torque is increased in FF and REW modes.																								
9	O	LM LIMIT (H)	Loading motor torque limiter output.																								
10	O	FF/REW (L)	This port supplies low signal during FF and REW modes.																								
11	O	UNLOADING (H)	This port supplies high signal while the mechanism is unloaded.																								
12	O	LOADING (H)	This port supplies high signal while the mechanism is loaded.																								
13	O	D.A. REC (H)	Normal audio recording control.																								
14	O	BIAS (H)																									
15	O	RGB	AV1 output selection control. RGB SW OFF: HIGH RGB SW ON : LOW																								
16	I	SHORT CHECK (H)	DC voltage (BIAS (H)) detection. ● When the low voltage is detected in recording mode, the VCR is turned off. ● When the high voltage is detected in except recording mode, the VCR is turned off.																								
17	I	S-VHS PB (H)	This port supplies high signal during S-VHS playback.																								
18	O	PB AI2 (H)	AI playback control.																								
19	O	PB AI1 (H)	AI playback control.																								

Fig. MP1

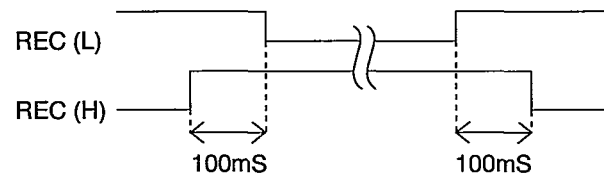
Pin Number	Input/Output	Port Name	Function																																				
20	I	S-TAB (L)	This port receives low signal while the cassette tape with safety tab is inserted.																																				
21	I	POSITION SW1	<table><tr><th>P. SW 3</th><th>P. SW 2</th><th>P. SW 1</th><th>Position (Mode) Name</th></tr><tr><td>O</td><td>O</td><td>O</td><td>EJECT</td></tr><tr><td>O</td><td>O</td><td>I</td><td>CASSETTE DOWN</td></tr><tr><td>O</td><td>I</td><td>O</td><td>REV, REV SLOW</td></tr><tr><td>O</td><td>I</td><td>I</td><td>MID (LOADING/UNLOADING)</td></tr><tr><td>I</td><td>O</td><td>O</td><td>PLAY/REC, STILL/PAUSE, CUE, FWD SLOW STOP3 *1</td></tr><tr><td>I</td><td>O</td><td>I</td><td>STOP</td></tr><tr><td>I</td><td>I</td><td>O</td><td>FF/REW</td></tr><tr><td>I</td><td>I</td><td>I</td><td>INTERMEDIATE</td></tr></table> (*1) The Pinch Roller is on the capstan motor shaft.	P. SW 3	P. SW 2	P. SW 1	Position (Mode) Name	O	O	O	EJECT	O	O	I	CASSETTE DOWN	O	I	O	REV, REV SLOW	O	I	I	MID (LOADING/UNLOADING)	I	O	O	PLAY/REC, STILL/PAUSE, CUE, FWD SLOW STOP3 *1	I	O	I	STOP	I	I	O	FF/REW	I	I	I	INTERMEDIATE
P. SW 3	P. SW 2	P. SW 1		Position (Mode) Name																																			
O	O	O		EJECT																																			
O	O	I		CASSETTE DOWN																																			
O	I	O		REV, REV SLOW																																			
O	I	I		MID (LOADING/UNLOADING)																																			
I	O	O		PLAY/REC, STILL/PAUSE, CUE, FWD SLOW STOP3 *1																																			
I	O	I		STOP																																			
I	I	O	FF/REW																																				
I	I	I	INTERMEDIATE																																				
22	I	POSITION SW2																																					
23	I	POSITION SW3																																					
24	O	SAT (H)	Input Video Signal selection control. The output signal is selected with VA at pin 6 and VB at pin 7.																																				
25	I	RESET (L)	This port is low while IC6001 is reset.																																				
26	I	MODE SELECT	Connecting to GND.																																				
27	I	ABS NORM IN	HIFI audio mode selection control. ● When the low voltage is detected, the audio output is compulsory normal audio mode.																																				
28	I	CPB	AV2 terminal input/output control.																																				
29	O	LINE (L)	Input signal control for HIFI audio circuit. MIC/TUNER: HIGH LINE : LOW																																				
30	O	REC (L)	DC voltage control for recording mode. 																																				
31	O	REC (H)																																					
32	O	A. DUB (H)	This port supplies high signal during audio dubbing mode.																																				
33	O	INSERT (H)	This port supplies low signal during insert mode.																																				
34	O	TV	AV1 output signal select control.																																				
35	O	TAPE SNS LED (L)	Sensor LED drive signal output. ● When this port supplies the low signal, the sensor LED is lit.																																				
36	O	SYSTEM 5	Refer to Fig. MP. 6																																				
37	I	5V (D)	5V																																				
38	O	12MHz OSC OUT	Oscillator output.																																				
39	I	12MHz OSC IN	Oscillator input.																																				
40	O	NC	Not used																																				

Fig. MP2

Pin Number	Input/Output	Port Name	Function
41	I	XI	Connecting to GND.
42	I	VSS2	GND
43	O	FULL ERASE (H)	Full erase on/off control. ON : HIGH OFF: LOW
44	O	D. REC (H)	Video signal recording on/off control.
45	O	D. FM. REC (H)	HIFI audio signal recording on/off control.
46	O	FLY. ERASE (H)	Flying erase head on/off control. ON : High OFF: Low
47	O	REC CUR 1	AI REC current switching signal output.
48	O	REC CUR 2	
49	O	REC CUR 3	
50	O	A. H. SW	HIFI audio head switching signal output.
51	O	S. DATA OUT	Serial data output.
52	I	S. DATA IN	Serial data input.
53	O	S. CLOCK	Serial clock output.
54	O	5P S. DATA OUT	EDIT 5P serial data output.
55	I	5P S. DATA IN	EDIT 5P serial data input.
56	O	5P S. CLOCK	EDIT 5P serial clock output.
57	O	CAP R/S/F	Capstan rotation direction control. REVERSE: HIGH STOP : MIDDLE FOWARD : LOW
58	O	CURRENT LIMIT	Capstan motor current limiter output.
59	O	ENV2	AI PB control signal output.
60	O	CYL AI (H)	This port supplies high signal during CYL AI mode.
61	O	ART V/H/N	This port supplies artificial vertical sync signal to stabilize the picture in special playback mode.
62	O	VIDEO H. SW	Video head switching signal output.
63	O	ROTARY SW	Rotary switching signal output.
64	O	H. AMP. SW	Head amp switching signal output.
65	I	ENVE SELECT	This port receives the playback envelope signal level to select the video head in special playback mode.
66	I	MIC (H)	Mic. detection control. Connecting Mic. : High No connecting Mic. : Low

Fig. MP3

Pin Number	Input/Output	Port Name	Function																			
88	O	NC	Not used																			
94	I	T- PHOTO	This port receives the signal (less than 2.4V) when take-up photo sensor detects the tape beginning.																			
95	I	S-PHOTO	This port receives the signal (less than 2.4V) when supply photo sensor detects the tape end.																			
96	I	NORMAL/ SERVICE/TEST	NORMAL/SERVICE/TEST mode selection. <table><tr><td>INPUT VOLTAGE</td><td>MODE</td></tr><tr><td>MORE THAN 4.0V</td><td>NORMAL</td></tr><tr><td>2.5V~4.0V</td><td>SERVICE</td></tr><tr><td>LESS THAN 2.5V</td><td>TEST</td></tr></table>	INPUT VOLTAGE	MODE	MORE THAN 4.0V	NORMAL	2.5V~4.0V	SERVICE	LESS THAN 2.5V	TEST											
INPUT VOLTAGE	MODE																					
MORE THAN 4.0V	NORMAL																					
2.5V~4.0V	SERVICE																					
LESS THAN 2.5V	TEST																					
97	I	TBC SW	TBC on/off control. TBC on : High																			
98	I	STEREO/ BILINGUAL	Audio mode detection for display on the OSD. <table><tr><td>INPUT VOLTAGE</td><td>DISPLAY</td></tr><tr><td>MORE THAN 4.2V</td><td>NO DISPLAY</td></tr><tr><td>3.0V~4.2V</td><td>MONO 1</td></tr><tr><td>2.0V~3.0V</td><td>BILINGUAL</td></tr><tr><td>0.8V~2.0V</td><td>MONO 1+2</td></tr><tr><td>LESS THAN 0.8V</td><td>STEREO</td></tr></table>	INPUT VOLTAGE	DISPLAY	MORE THAN 4.2V	NO DISPLAY	3.0V~4.2V	MONO 1	2.0V~3.0V	BILINGUAL	0.8V~2.0V	MONO 1+2	LESS THAN 0.8V	STEREO							
INPUT VOLTAGE	DISPLAY																					
MORE THAN 4.2V	NO DISPLAY																					
3.0V~4.2V	MONO 1																					
2.0V~3.0V	BILINGUAL																					
0.8V~2.0V	MONO 1+2																					
LESS THAN 0.8V	STEREO																					
99	I	DEW SNS	This port is more than 1.36V during detecting the dew formation.																			
100	I	TEST SIG. SW	RF test signal on/off switching signal. Test signal on : Low																			
101	I	GND	Not used																			
102	I	GND	Not used																			
103	I	CPS (H)	Component (Low)/Composit (High) select control.																			
104	I	EDIT (H)	EDIT on/off switching control. EDIT on : High																			
105	I	TRACKING ENVE	Playback envelope input for tracking adjustment.																			
106	I/O	EDIT TRIG	Trigger signal in/output for synchronized editing.																			
107	I/O	PB/TUN/LINE	Normal audio switching control.																			
108	O	SYSTEM 4	Refer to Fig. MP. 6																			
109	I/O	PREROLL	Preroll signal in/output for synchronized editing.																			
110	O	SYSTEM 2	Refer to Fig. MP. 6																			
111	O	SYSTEM 1	Refer to Fig. MP. 6																			
112	I/O	HIFI/MIX/NORM	Audio output mode control. <table><tr><td rowspan="2"></td><td colspan="4">MODE</td></tr><tr><td>STEREO</td><td>L CH</td><td>R CH</td><td>NORMAL</td></tr><tr><td>HIFI/MIX/NORM</td><td>H</td><td>H</td><td>H</td><td>L</td></tr><tr><td>L CH/R CH/STEREO</td><td>L</td><td>H</td><td>Z</td><td>L</td></tr></table>		MODE				STEREO	L CH	R CH	NORMAL	HIFI/MIX/NORM	H	H	H	L	L CH/R CH/STEREO	L	H	Z	L
	MODE																					
	STEREO	L CH	R CH	NORMAL																		
HIFI/MIX/NORM	H	H	H	L																		
L CH/R CH/STEREO	L	H	Z	L																		
113	O	L CH/R CH/ STEREO	Z: HIGH IMPEDANCE																			
114	I	5V	VDD																			

Fig. MP4

Pin Number	Input/Output	Port Name	Function																																	
115	O	TBC MODE 0	TBC control. <table><tr><td></td><td>TBC SW</td><td>MODE</td><td>TBC (H)</td><td>TBC M0</td><td>TBC M1</td></tr><tr><td>EE</td><td>ON/OFF</td><td></td><td>L</td><td>H</td><td>H</td></tr><tr><td rowspan="3">VV</td><td>OFF</td><td></td><td>L</td><td>(*1)</td><td>(*1)</td></tr><tr><td rowspan="2">ON</td><td>PLAY</td><td>H</td><td>H</td><td>H</td></tr><tr><td>SLOW/STILL</td><td>H</td><td>L (*2)</td><td>H</td></tr><tr><td></td><td></td><td>CUE/REV</td><td>H</td><td>H</td><td>L</td></tr></table>		TBC SW	MODE	TBC (H)	TBC M0	TBC M1	EE	ON/OFF		L	H	H	VV	OFF		L	(*1)	(*1)	ON	PLAY	H	H	H	SLOW/STILL	H	L (*2)	H			CUE/REV	H	H	L
	TBC SW	MODE	TBC (H)	TBC M0	TBC M1																															
EE	ON/OFF		L	H	H																															
VV	OFF		L	(*1)	(*1)																															
	ON	PLAY	H	H	H																															
		SLOW/STILL	H	L (*2)	H																															
		CUE/REV	H	H	L																															
116	O	TBC MODE 1																																		
117	O	TBC (H)	(*1) The condition is same as TBC ON under VV mode. (*2) Low/High signal is supplied during slow mode.																																	
118	O	AVPB (H)	AV1 PB (H) output control.																																	
119	I	GND	GND																																	
120	O	DEA	AV2 output signal selection control. <table><tr><td>AV2 OUTPUT</td><td>DEA</td><td>DEB</td></tr><tr><td>TUNER</td><td>H</td><td>L</td></tr><tr><td>AV1</td><td>L</td><td>L</td></tr><tr><td>SAT</td><td>L</td><td>H</td></tr><tr><td>VCR OUT</td><td>H</td><td>H</td></tr></table>	AV2 OUTPUT	DEA	DEB	TUNER	H	L	AV1	L	L	SAT	L	H	VCR OUT	H	H																		
AV2 OUTPUT	DEA	DEB																																		
TUNER	H	L																																		
AV1	L	L																																		
SAT	L	H																																		
VCR OUT	H	H																																		
121	O	DEB																																		
122	O	AI MES (H)	This port supplies high signal when measuring the head and tape condition to determine the optimum recording current before starting the AI recording.																																	
123	O	POWER OFF (H)	Power on/off control.																																	
124	O	TRICK (L)	This port supplies low signal during special playback (CUE, REV, SLOW, STILL) mode.																																	

Fig. MP5

	MODE 1	MODE 2	MODE 3	MODE 4
PIN 111 (SYSTEM 1)	H: MESECAM L: PAL Z: AUTO	H: MESECAM L: PAL	H: PAL L: NTSC Z: AUTO	H: MESECAM L: PAL Z: AUTO
PIN 110 (SYSTEM 2)	H: EXCEPT NTSC L: NTSC-M	H: SECAM L: PAL Z: AUTO	—	H: EXCEPT NTSC L: NTSC-M
PIN 108 (SYSTEM 4)	H: PAL-I L: B/G/D/K	H: SECAM L: PAL	—	H: PAL-I L: B/G/D/K
PIN 36 (SYSTEM 5)	H: PAL L: NTSC	H: PAL L: NTSC	H: 50Hz L: 60Hz	H: PAL L: NTSC

Z: HIGH IMPEDANCE

Fig. MP6

INPUT/OUTPUT CHART FOR IC7501

Pin Number	Input/Output	Port Name	Function
1	O	L CH (L)	FIP level meter Lch (L)
2	I	AFC (S)	AFC S-CURVE
3	O	DEL (L)	AV2 connector detection DECODER: LOW EXT : HIGH
4	O	L CTL	LANK clock control
5	I	JOG1	JOG1
6	O	IC CLK	Tuner IC control clock
7	I	IR	Remote controller data
8	I	L CLK	LANK clock
9	O	FS CS (H)	FS chip select (H)
10	I	JOG2	JOG2
11	O	SAT IR	SAT IR output
12	I	POW FAIL (L)	Power fail detection
13	I	RESET (L)	Reset (L)
14	I	S CLK	Serial clock
15	I	S DATA IN	Serial data input
16	O	S DATA OUT	Serial data input
17	O	T CLK	Timer bus clock output
18	I	T LSN	Timer data input (from OSD)
19	O	T TLK	Timer data output (to OSD)
20	O	128Hz	128Hz
21	I	NC	Not used
22	O	STAND BY (L)	Stand by (L)
23	O	NC	Not used
24	O	FIP (L)	FIP heater on (L)
25 26 27 28 29	I	KEY SCAN	Key scan input
30	O	AUDIO DEF (H)	Audio defeat high output
31	O	R CH (L)	FIP level meter Rch (L)

Fig. MP7

Pin Number	Input/Output	Port Name	Function
32	O	P17	DGT1
33	O	P16	DGT2
34	O	P15	DGT3
35	O	P14	DGT4
36	O	P13	DGT5
37	O	P12	DGT6
38	O	P11	DGT7
39	O	P10	DGT8
40	O	P07	DGT9/Key scan output
41	O	P06	DGT10/Key scan output
42	O	P05	SEG J/Key scan output
43	O	P04	SEG I/Key scan output
44	O	P03	SEG H/Key scan output
45	O	P02	SEG D/Key scan output
46	O	P01	SEG E/Key scan output
47	O	P00	SEG C/Key scan output
48	O	P37	SEG G/Key scan output
49	O	P36	SEG F/Key scan output
50	O	P35	SEG B/Key scan output
51	O	P34	SEG A/Key scan output
52	O	AI ON (H)	AI on (H) output
53	O	OSD ON (H)	OSD on (H) output
54	O	METER OFF (H)	Level meter off (H) output
55	O	MONO (H)	Forced MONO (NICAM off) (H) output
56	—	VEE	−29V
57	—	VCC	+5V
58	O	XOUT	8.39MHz clock output
59	I	XIN	8.39MHz clock input
60	—	VSS	GND
61	I	XCIN	32KHz clock input
62	O	XCOUT	32KHz clock output
63	O	SIMUL (H)/SI (H)	Simul (H) output
64	O	SELECT MUTE (H)	Audio select mute (H) output

Fig. MP8

SYSTEM CHART FOR NICAM DECODER

TV SYSTEM SELECT

IC7305		TV SYSTEM	SOUND MODULATION
SW1	SW2		
L	L	B/G	FM-MONO/NICAM GERMAN MULTIPLEX
H	L	I	FM-MONO/NICAM
*	H	M	FM-MONO

*: DO NOT CARE

FM-MONO MODE SELECT

IC7305	FM-MONO MODE	FM-MONO SOURCE
SW3		
L	INT	SIF (IF INPUT1, IF INPUT2)
H	EXT	AUDIO MULTI (MONO IN)

SIF INPUT SELECT

IC7305	SIF INPUT
SW4	
L	IF INPUT 1
H	IF INPUT 2

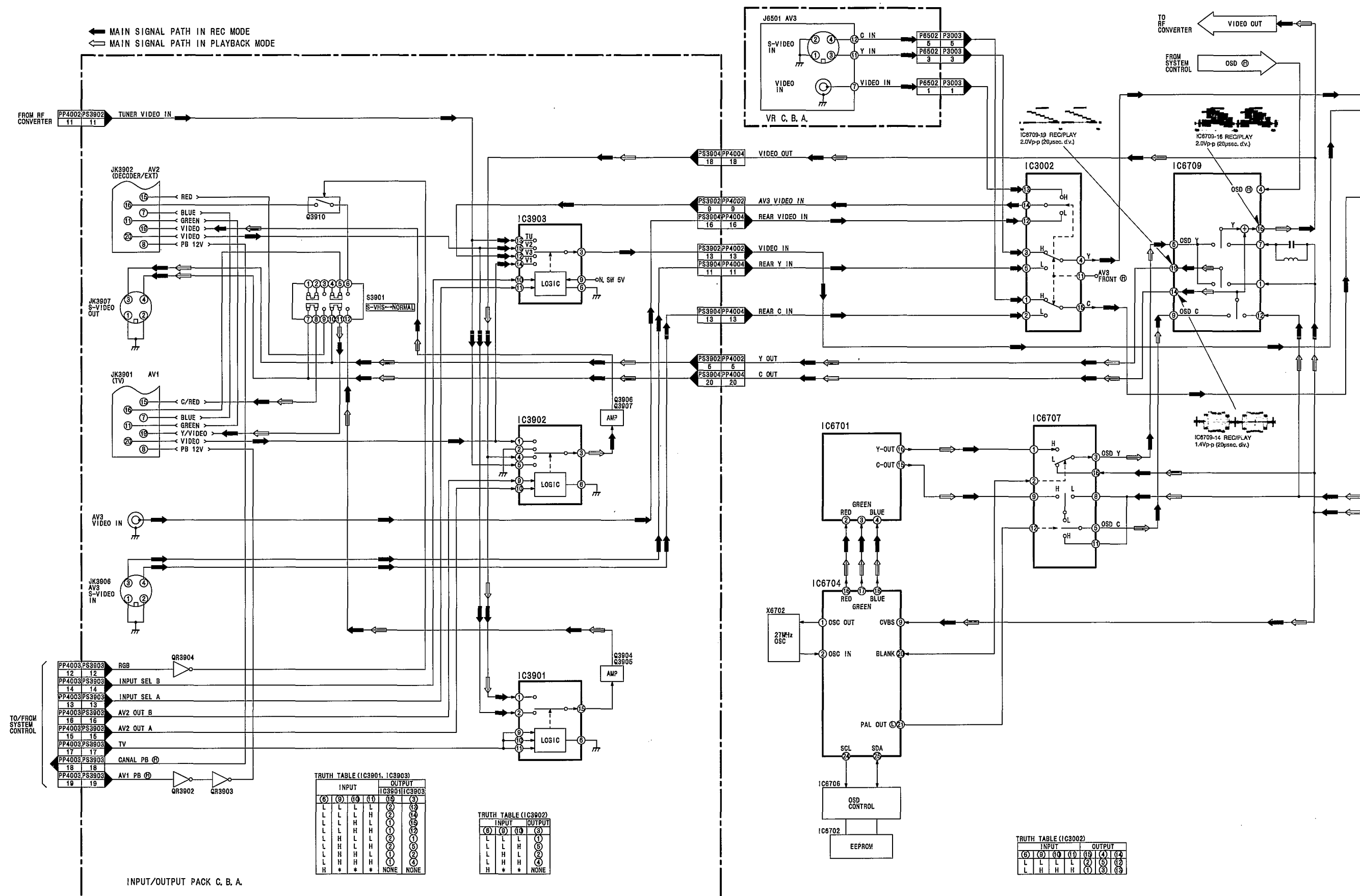
AUDIO OUTPUT SELECT

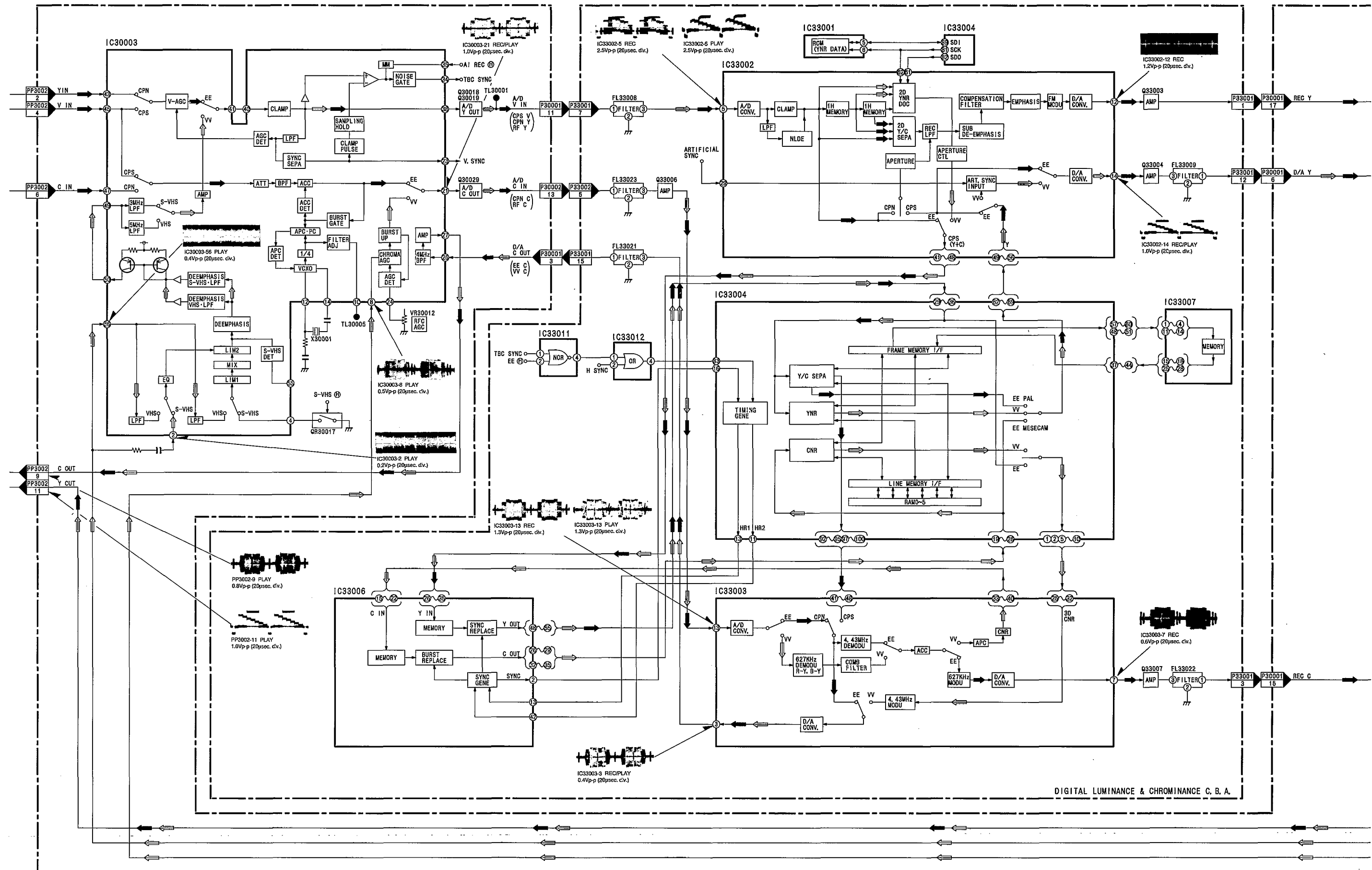
INPUT TV SYSTEM	SOUND MODULATION	FM-MONO MODE	MAIN OUTPUT		SUB OUTPUT	
			INPUT SOURCE	MATRIX	INPUT SOURCE	MATRIX
B/G	MONO	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
	NICAM STEREO	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM M1/DATA	INT	IF INPUT 1/2 (NICAM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	MONAURAL	MONO IN	MONAURAL
	NICAM M1/M2	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM DATA	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
I	MONO	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
	NICAM STEREO	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM M1/DATA	INT	IF INPUT 1/2 (NICAM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	MONAURAL	MONO IN	MONAURAL
	NICAM M1/M2	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM DATA	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
M	MONO	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL

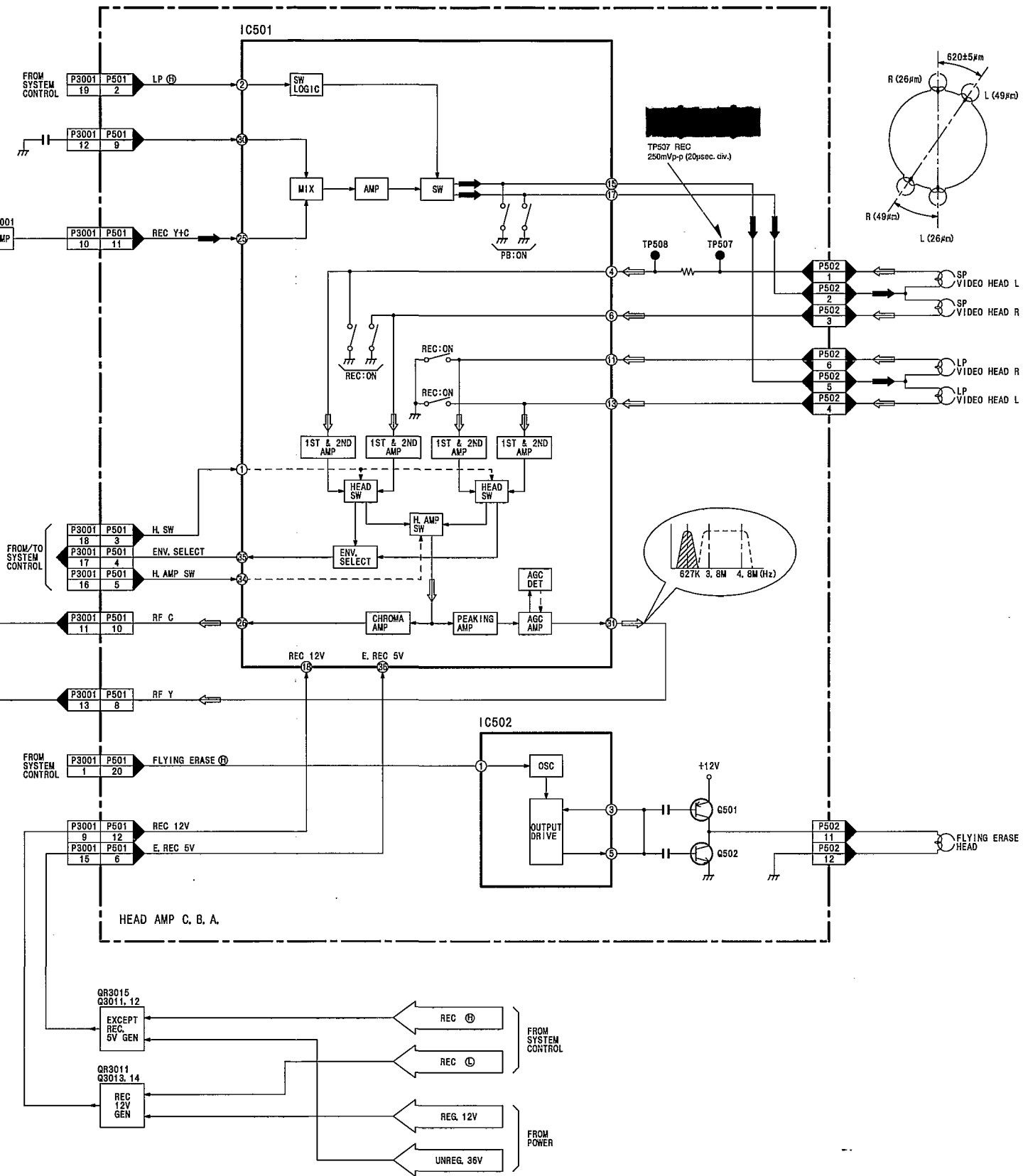
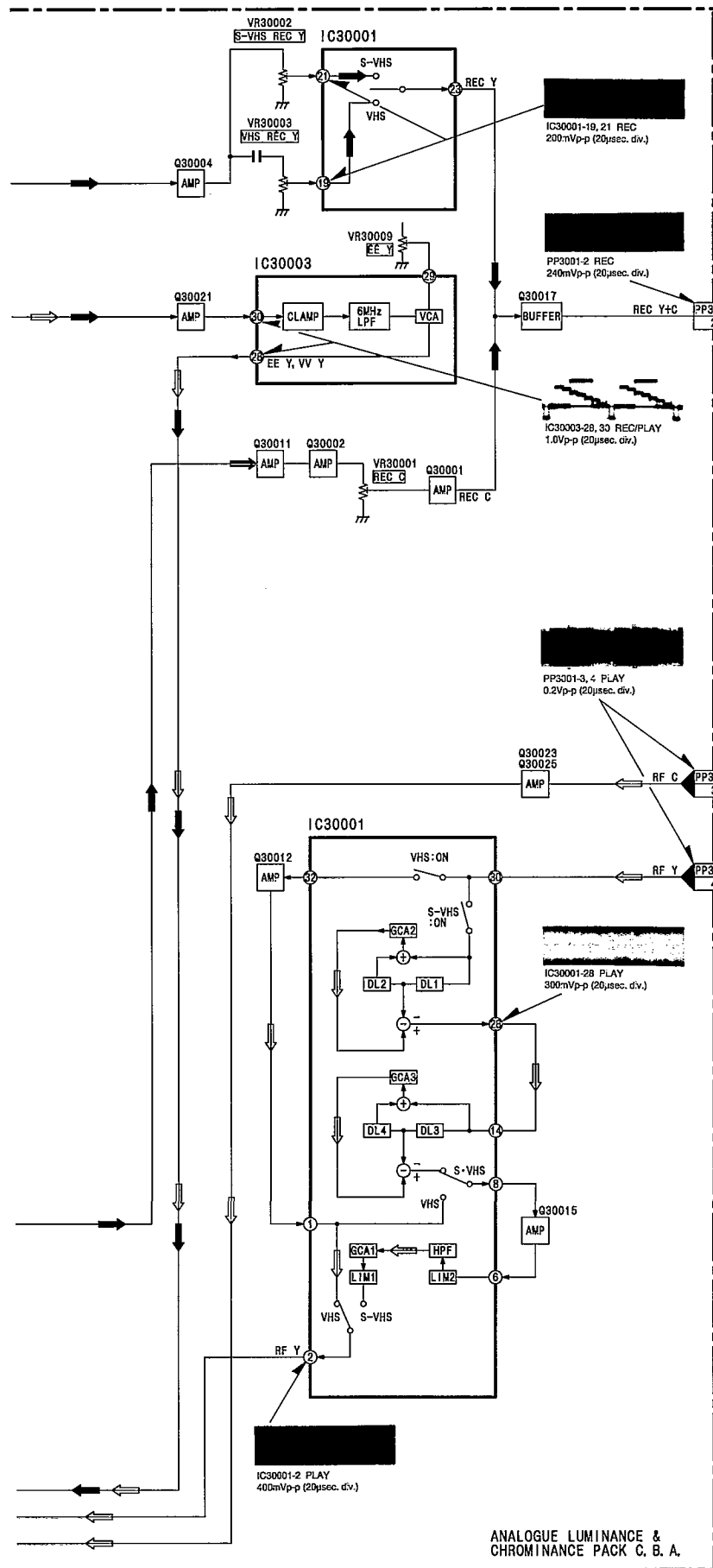
Note: When the IC7305-15 (F MONO) is high, both the MAIN OUTPUT and the SUB OUTPUT apply the FM-MONO audio.



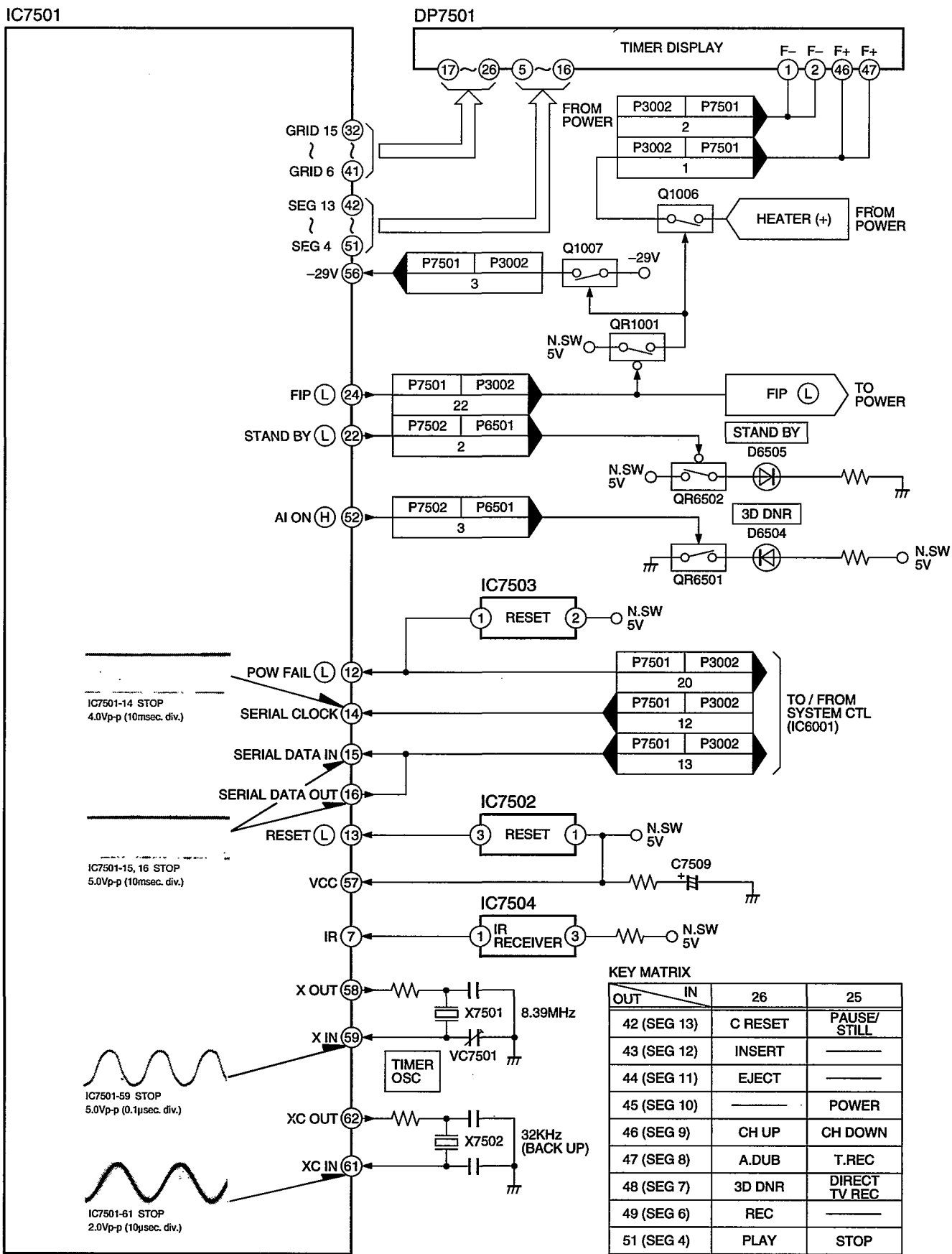
3-3. LUMINANCE & CHROMINANCE BLOCK DIAGRAM



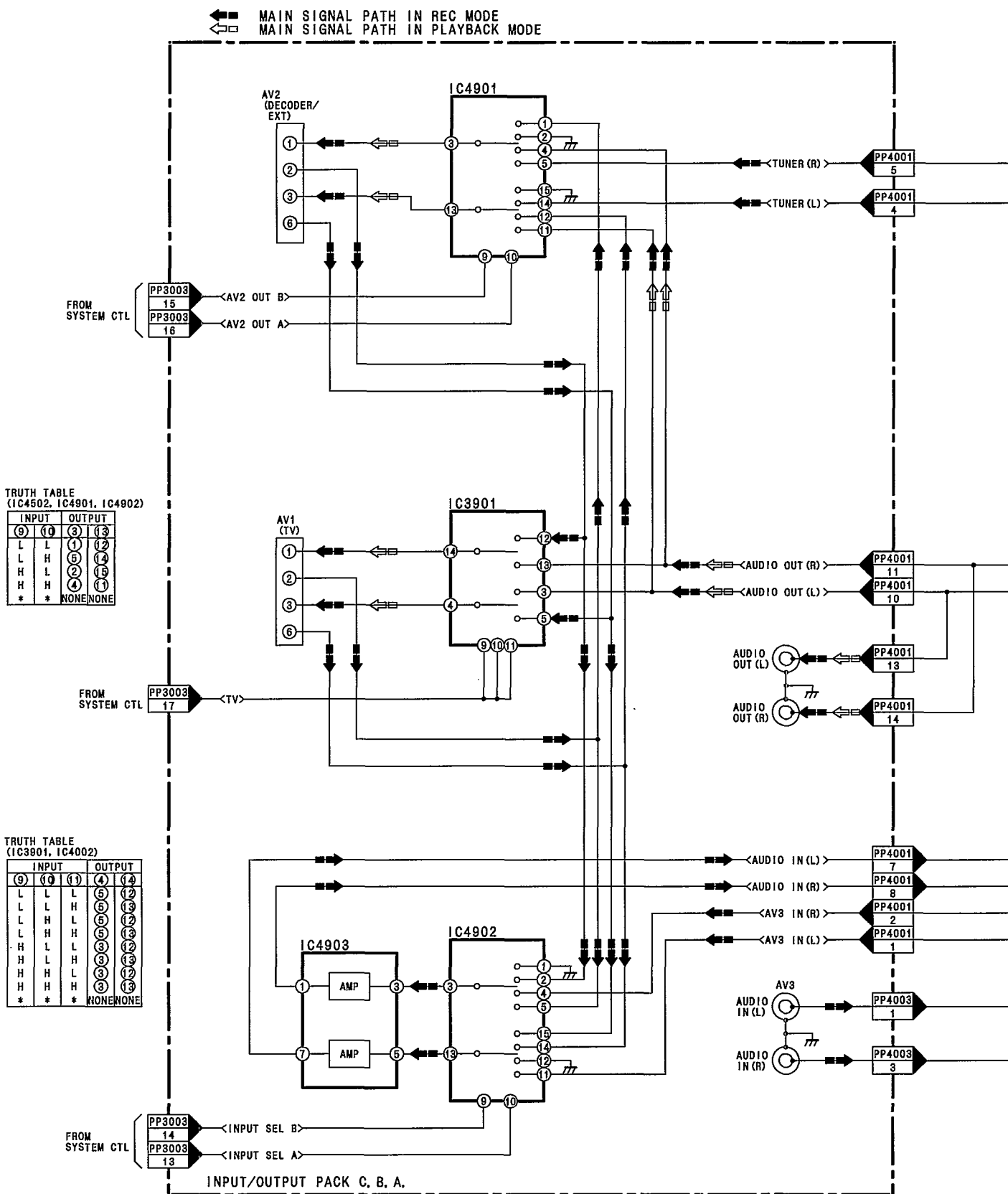




3-4. TIMER BLOCK DIAGRAM



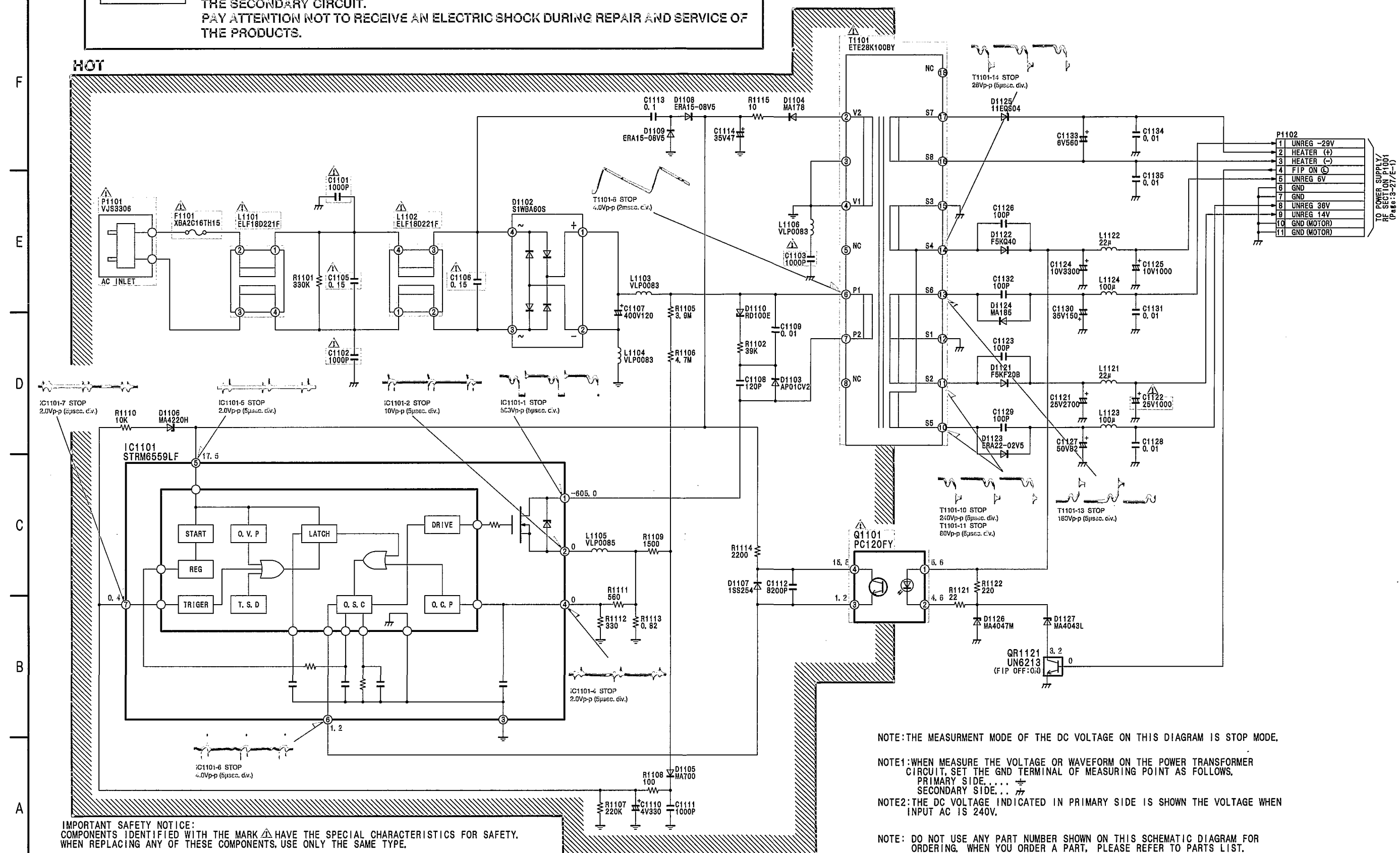
3-5. HI-FI AUDIO BLOCK DIAGRAM



3-6. POWER SCHEMATIC DIAGRAM

CAUTION

THE RED MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.



NOTE:THE MEASURMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE1:WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER
CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE....
SECONDARY SIDE...

NOTE2:THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN
INPUT AC IS 240V.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

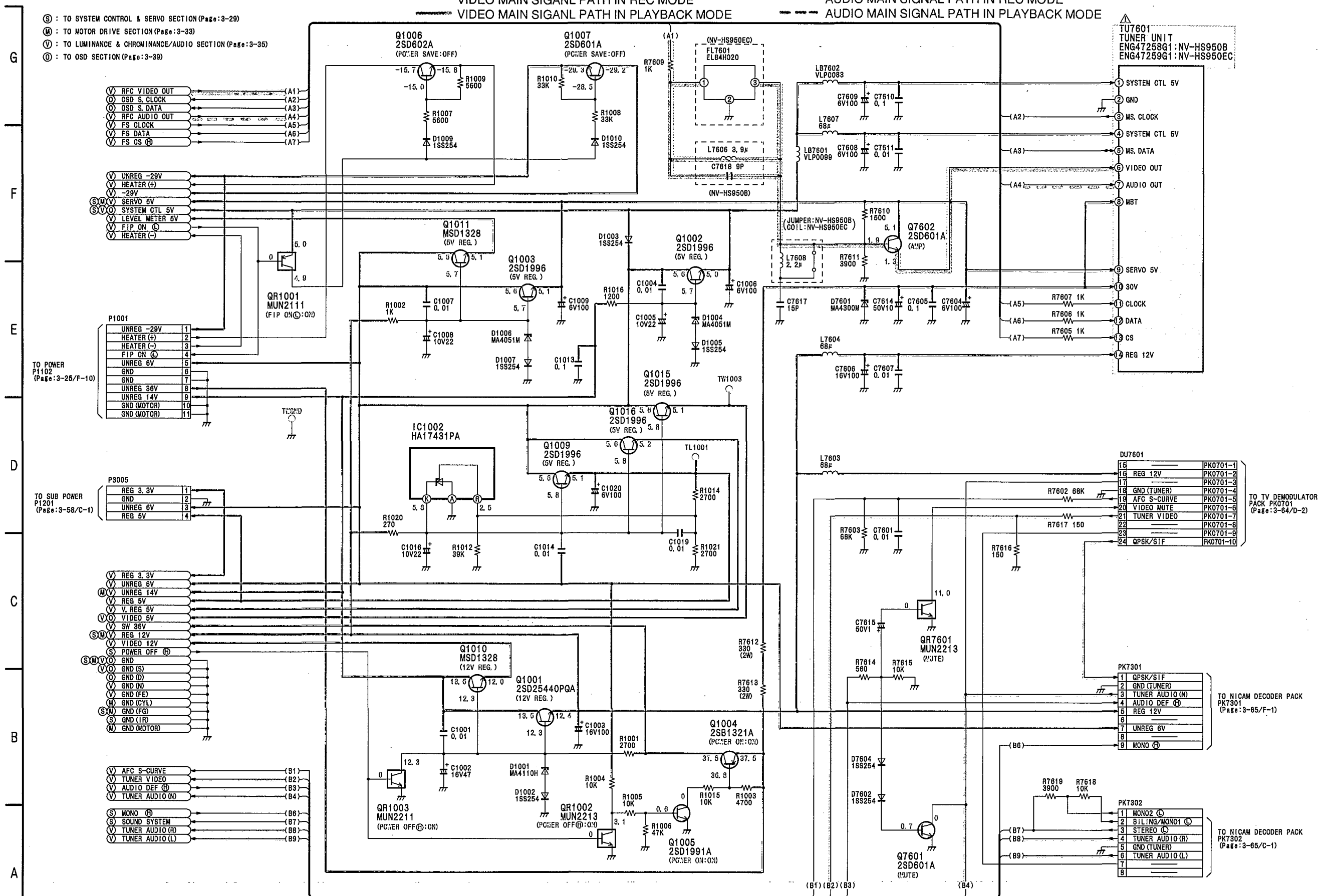
3-7. POWER SUPPLY/RF SECTION IN MAIN SCHEMATIC DIAGRAM

- ⑤ : TO SYSTEM CONTROL & SERVO SECTION (Page:3-29)
- ④ : TO MOTOR DRIVE SECTION (Page:3-33)
- ③ : TO LUMINANCE & CHROMINANCE/AUDIO SECTION (Page:3-35)
- ② : TO OSD SECTION (Page:3-39)

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

 AUDIO MAIN SIGNAL PATH IN REC MODE
 AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

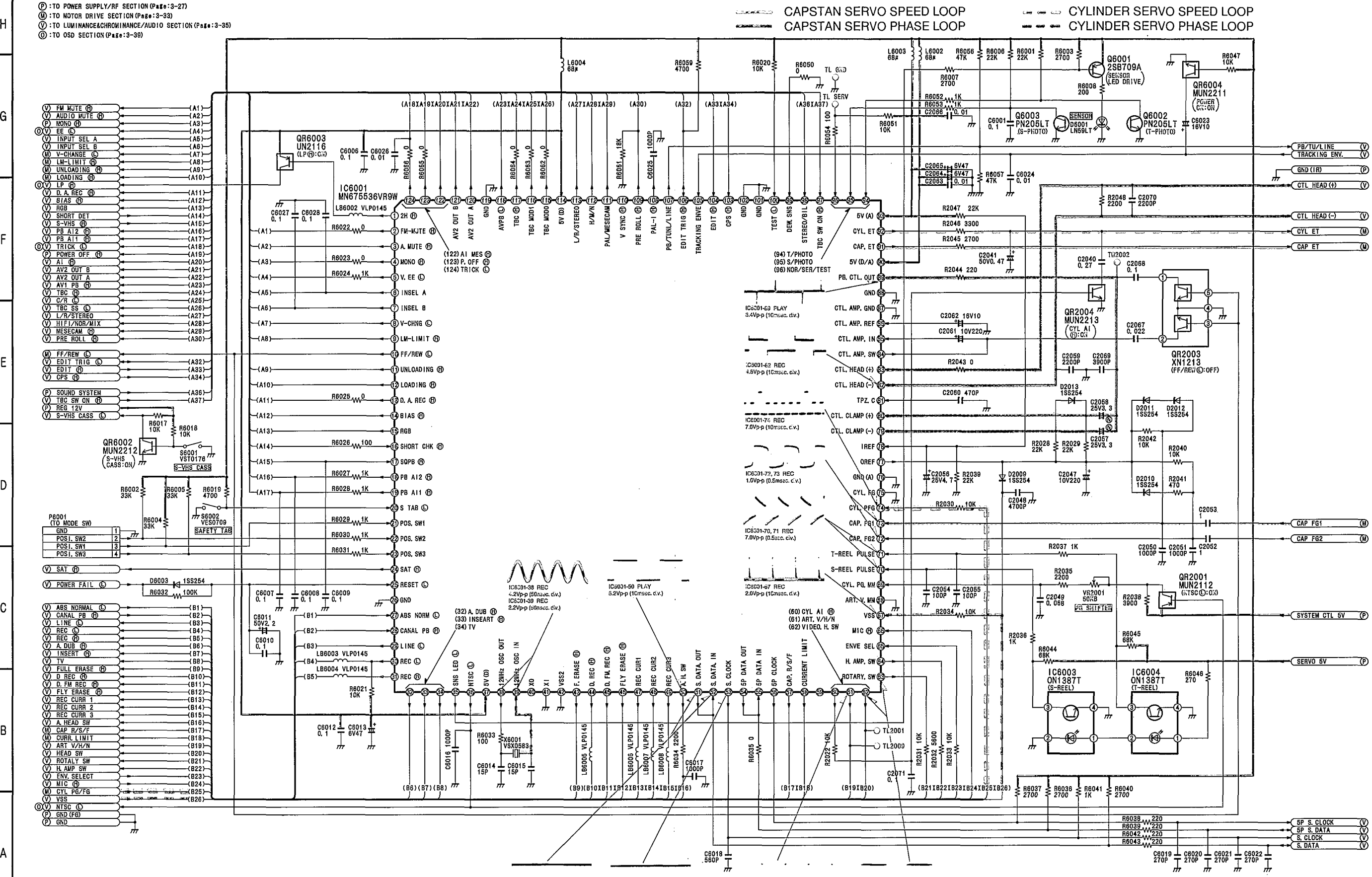


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-8. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM



SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (S-VHS: SP MODE)

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	4.9	0	0	4.9	0	4.9	0.4	4.9	0	4.8	0	0	0	0	4.9	1.1	4.9	0	0	0
PLAY	4.9	0	0	4.9	4.8	4.9	0.4	4.9	0	4.8	0	0	0	0	4.9	0.8	0	0	0	0
REC	4.9	0	0	4.9	0	4.9	0.4	4.8	0	4.8	0	0	0	4.9	4.9	4.6	4.9	0	0	0
F.F	4.9	0	0	4.9	0	4.9	0.4	0	0	0	0	0	0	0	5.0	1.0	4.9	0	0	0
REW	4.9	0	0	4.9	0	4.9	0.4	0	0	0	0	0	0	0	4.9	1.0	4.9	0	0	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	5.0	0	5.0	0	4.9	0	4.9	0	0	4.8	0	0	0	4.9	4.9	4.9	4.9	2.4	2.6	4.6
PLAY	0	0	0	0	4.9	0	0	0	0	4.8	0	0	0	4.9	0.1	0	4.9	2.4	2.6	4.5
REC	0	0	0	0	4.9	0	4.9	0	0	0	4.8	0	0	0	0.1	4.8	4.9	2.5	2.6	4.5
F.F	0	0	5.0	0	5.0	0	4.9	0	0	4.8	0	0	0	4.9	0.1	4.9	4.9	2.5	2.6	4.5
REW	0	0	5.0	0	4.9	0	4.9	0	0	4.8	0	0	0	4.9	0.1	4.9	4.9	2.5	2.6	4.5
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0	0	0	0	0	0	4.9	0	0	4.6	4.6	4.5	4.8	4.8	4.8	2.0	0	4.9	0
PLAY	0	0	0	0	0	0	0	4.9	0	2.4	4.6	4.6	4.5	4.8	4.8	4.8	0	4.9	4.9	0
REC	0	0	4.9	4.9	4.8	0	0	4.9	0	0	0	4.6	4.4	4.8	4.8	4.8	0	0	4.9	0
F.F	0	0	0	0	0	0	0	4.9	0	0	4.6	4.6	4.5	4.8	4.8	4.8	0	4.9	4.9	0
REW	0	0	0	0	0	0	0	4.9	0	0	4.6	4.6	4.5	4.8	4.8	4.8	0	4.9	4.9	0
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	0	0	0.3	0	2.4	0	5.0	0	5.0	2.4	2.4	5.0	0	0	2.4	2.4	2.3	2.5
PLAY	0	0	2.4	0	0	0	2.4	0	3.1	4.9	3.1	2.4	2.4	1.0	0	0	2.4	2.4	2.5	2.4
REC	0	2.4	2.4	0	4.3	0	2.4	0	3.1	4.9	4.1	2.3	2.4	1.0	0	0	2.4	2.4	2.3	2.5
F.F	0	2.4	0	0	2.3	0	2.4	0	3.1	2.3	0	2.4	2.4	1.0	0	0	2.4	2.4	2.3	2.5
REW	0	2.4	0	0	2.4	0	2.4	0	3.1	2.3	0	2.4	2.4	1.0	0	0	2.4	2.4	2.7	2.2
REF. NO.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	4.9	0	0	0	2.4	2.4	0	0	2.4	5.0	1.4	4.7	4.9	4.8	5.0	4.9	5.1	5.1	0	5.0
PLAY	4.9	0	0	0	2.4	2.4	0	0	2.4	5.0	2.6	2.3	4.9	4.8	5.0	4.9	5.1	5.1	0	5.0
REC	4.8	2.2	2.7	0	2.4	2.4	0	0	2.4	4.9	2.6	2.3	4.9	4.8	5.0	4.9	5.0	5.1	0	5.0
F.F	4.9	0	0	0	2.4	2.4	0	0	2.4	5.0	2.5	2.4	4.9	4.8	5.0	4.9	5.0	5.1	0	5.0
REW	4.9	0	0	0	2.4	2.4	0	0	2.4	5.0	2.5	2.4	4.9	4.8	5.0	4.9	5.0	5.1	0	5.0
REF. NO.	IC6001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	0	0	4.4	4.5	1.6	5.0	0	4.9	0	4.9	0	4.9	0	4.9	4.9	4.9	0	0	0	4.9
PLAY	0	0	4.6	4.5	2.9	5.0	4.9	4.9	0	4.9	0	4.9	0	4.9	4.9	4.9	4.9	4.8	0	4.9
REC	0	0	4.4	4.5	1.7	5.0	0	4.9	0	4.9	0	4.9	0	4.9	4.9	4.9	0	0	0	0
F.F	0	0	0	4.5	2.3	5.0	0	4.9	0	4.9	0	4.9	0	4.9	4.9	4.9	0	0	0	4.9
REW	0	0	0	4.5	2.4	5.0	0	4.9	0	4.9	0	4.9	0	4.9	4.9	4.9	0	0	0	4.9
REF. NO.	IC6001																			
MODE	121	122	123	124																
STOP	4.9	0	0	4.9																
PLAY	4.9	0	0	4.9																
REC	4.9	0	0	4.9																
F.F	4.9	0	0	4.9																
REW	4.9	0	0	4.9																
REF. NO.	IC6003										IC6004									
MODE	1	2	3	4							1	2	3	4						
STOP	1.1	0	0	0							2.3	1.1	5.0	0						
PLAY	1.1	0	4.9	0							2.3	1.1	4.5	0						
REC	1.1	0	4.9	0							2.3	1.1	4.1	0						
F.F	1.1	0	2.3	0							2.3	1.1	2.2	0						
REW	1.1	0	2.3	0							2.3	1.1	2.2	0						

SYSTEM CONTROL & SERVO TRs DC VOLTAGE CHART (S-VHS: SP MODE)

REF. NO.	Q6001			Q6002			Q6003											
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	5.0	0	5.0	4.8	0		5.0	0										
PLAY	5.0	5.0	4.2	4.8	0		5.0	0										
REC	5.0	4.9	4.2	4.8	0		5.0	0										
F.F	5.0	4.9	4.2	4.8	0		5.0	0										
REW	5.0	4.9	4.2	4.8	0		5.0	0										
REF. NO.	QR2001			QR2002			QR2003			QR2004								
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	5.0	5.0	4.9	0	0	4.8	0	0	4.8	0	0	0						
PLAY	5.0	5.0	0	0	0	4.8	0	0	4.8	0	0	0						
REC	5.0	4.7	4.8	0	0	4.8	0	0	4.8	0	0	0						
F.F	5.0	4.7	4.8	0	0	0	0	1.4	0	0	0	0						
REW	5.0	4.7	4.8	0	0	0	0	1.4	0	0	0	0						
REF. NO.	QR6002			QR6003			QR6004											
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	7.8	4.9	0	4.9	0	0	2.8									
PLAY	0	0	7.9	4.9	0	4.9	0	0	2.8									
REC	0	0	7.8	4.9	0	4.9	0	0	2.8									
F.F	0	0	7.8	4.9	0	4.9	0	0	2.8									
REW	0	0	7.8	4.9	0	4.9	0	0	2.8									

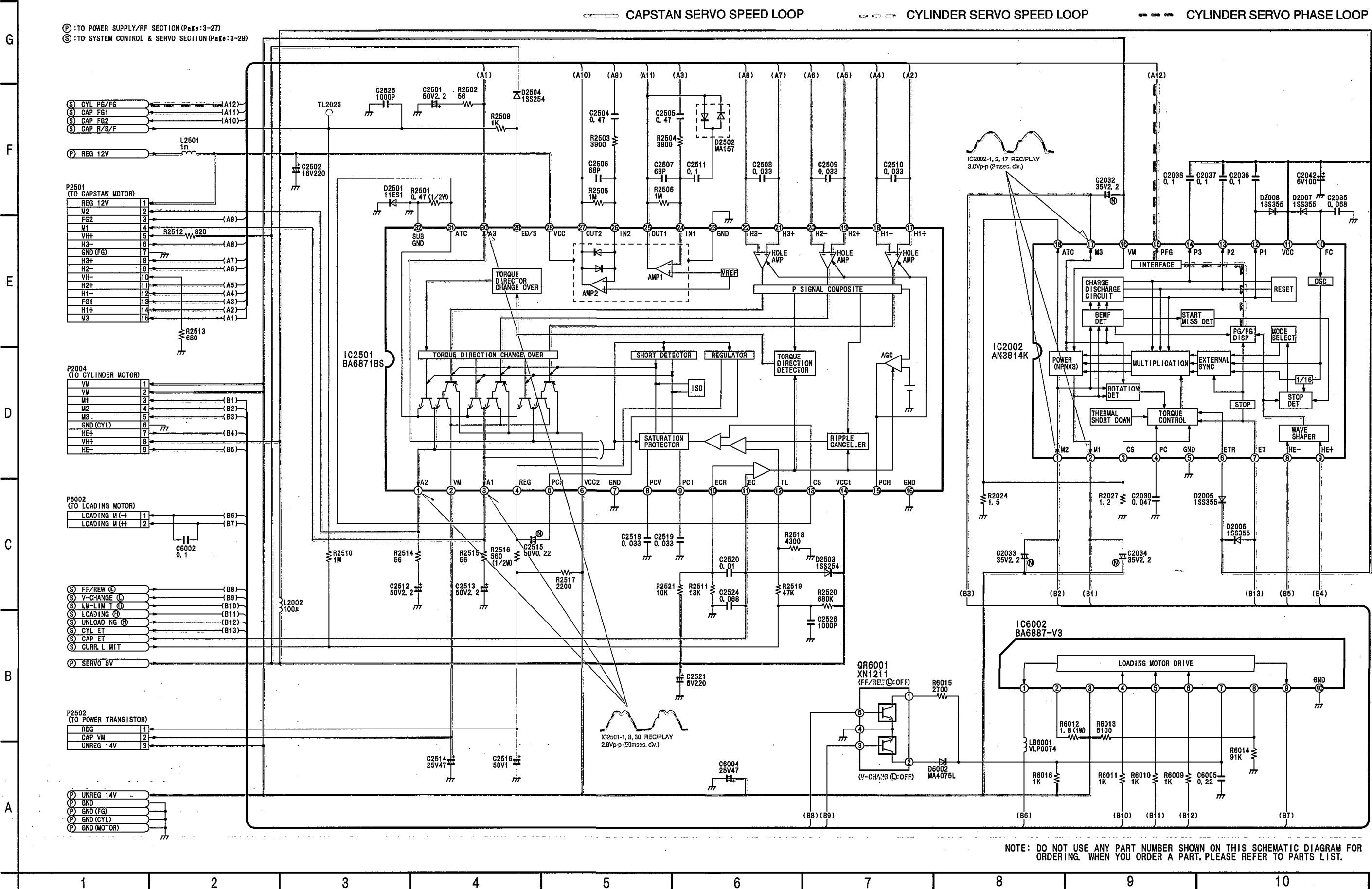
MOTOR DRIVE ICs DC VOLTAGE CHART (S-VHS: SP MODE)

REF. NO.	IC2002																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
STOP	13.6	13.6	0	0	0	2.4	4.7	2.5	2.4	1.0	5.0	4.1	4.1	3.7	5.0	13.6	13.6	0
PLAY	12.9	12.9	0	0.5	0	2.4	2.3	2.5	2.4	2.6	5.0	3.7	3.7	3.7	1.0	13.2	12.9	0
REC	12.9	12.9	0	0.5	0	2.4	2.3	2.5	2.4	2.6	5.0	3.7	3.7	3.7	1.0	13.3	12.9	0
F.F	13.0	13.0	0	0.5	0	2.4	2.4	2.5	2.4	2.6	5.0	3.7	3.7	3.7	1.0	13.3	12.9	0
REW	13.0	13.0	0	0.5	0	2.4	2.4	2.5	2.4	2.6	5.0	3.7	3.7	3.7	1.0	13.3	13.0	0
REF. NO.	IC2501																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
STOP	1.9	4.5	1.9	13.0	1.2	13.6	0	0	1.0	2.9	1.4	0	0	5.0	1.4	0	2.3	2.3
PLAY	1.8	4.5	1.8	12.0	2.2	13.3	0	0	1.0	2.9	2.6	0.4	0	5.0	1.3	0	2.3	2.3
REC	1.6	4.5	1.6	12.1	2.0	13.3	0	0.5	0.6	2.9	2.6	0.3	0	5.0	1.3	0	0	2.3
F.F	6.3	13.1	6.3	4.6	11.4	13.3	0	0.5	0.7	2.9	2.1	0.4	0	5.0	1.4	0	0	2.3
REW	6.3	13.2	6.3	4.6	11.4	13.3	0	0.6	0.7	2.9	2.1	0.4	0	5.0	1.3	0	2.3	2.3
REF. NO.	IC2501																	
MODE	21	22	23	24	25	26	27	28	29	30	31	32						
STOP	2.3	2.3	0	5.9	5.8	5.9	5.8	11.5	2.0	1.9	0	0						
PLAY	2.3	2.3	0	5.9	5.8	5.9	5.9	11.5	0	1.8	0	0						
REC	2.3	2.3	0	5.9	5.8	5.9	5.9	11.5	0	1.7	0	0						
F.F	2.3	2.3	0	5.9	5.8	5.9	5.9	11.5	0	6.3	0	0						
REW	2.3	2.3	0	5.9	5.8	5.9	5.9	11.5	5.0	6.3	0	0						
REF. NO.	IC6002																	
MODE	1	2	3	4	5	6	7	8	9	10								
STOP	0.4	13.6	13.6	0	0	0	7.3	2.8	0.3	-0.1								
PLAY	0.3	13.3	13.3	0	0	0	7.3	2.6	0.4	0								
REC	0.2	13.3	13.3	0	0	0	7.3	2.6	0.4	0								
F.F	0.2	13.3	13.3	0	0	0	13.3	2.4	0.3	0								
REW	0.2	13.3	13.3	0	0	0	13.3	2.6	0.3	0								

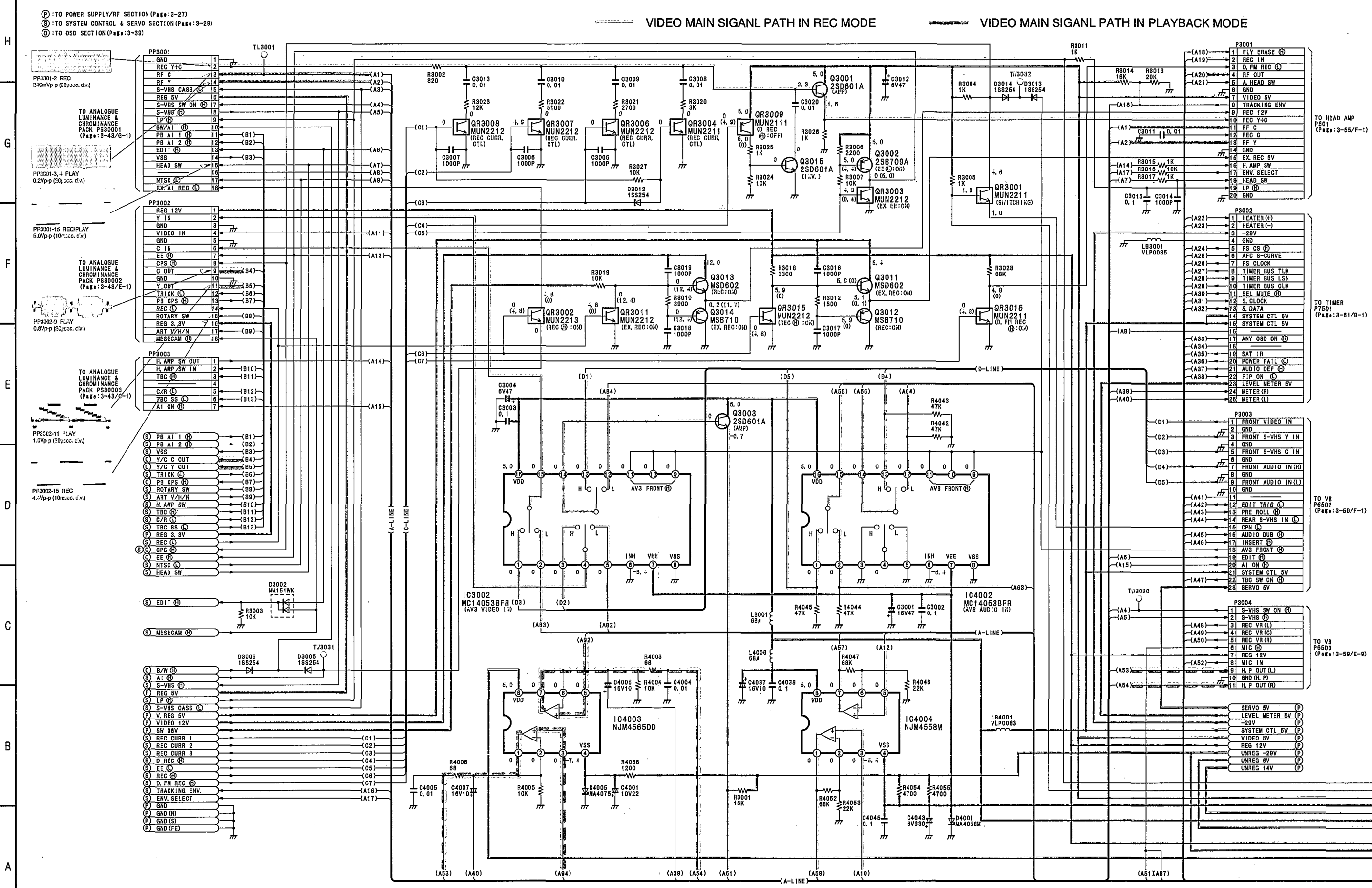
MOTOR DRIVE TRs DC VOLTAGE CHART (S-VHS: SP MODE)

REF. NO.	QR6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	4.8	0	4.8															
PLAY	0	0	4.8	0	4.8															
REC	0	0	4.8	0	4.8															
F.F	13.3	6.8	0	0	0															
REW	13.3	6.8	0	0	0															

3-9. MOTOR DRIVE SECTION IN MAIN SCHEMATIC DIAGRAM



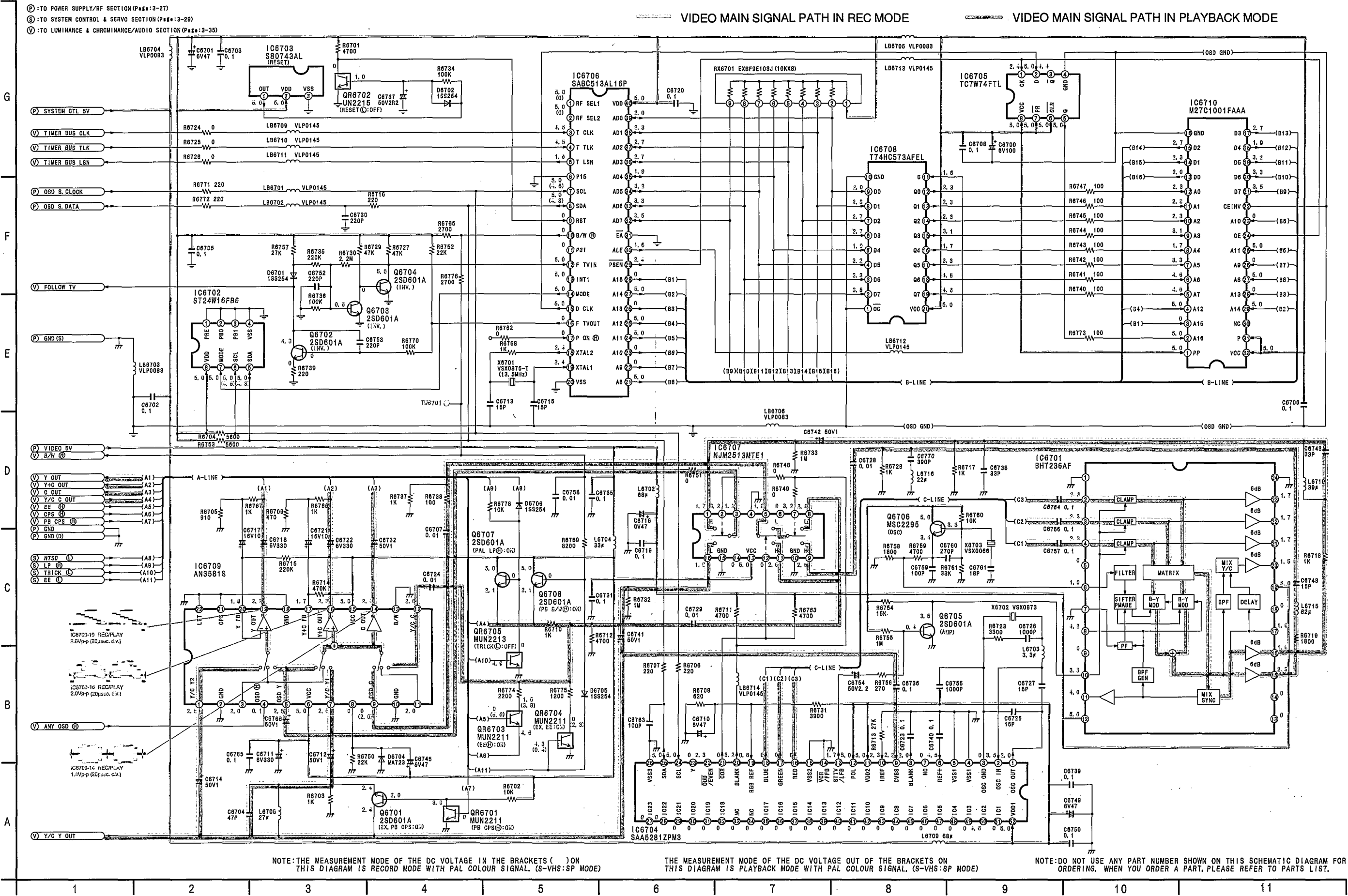
3-10. LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM



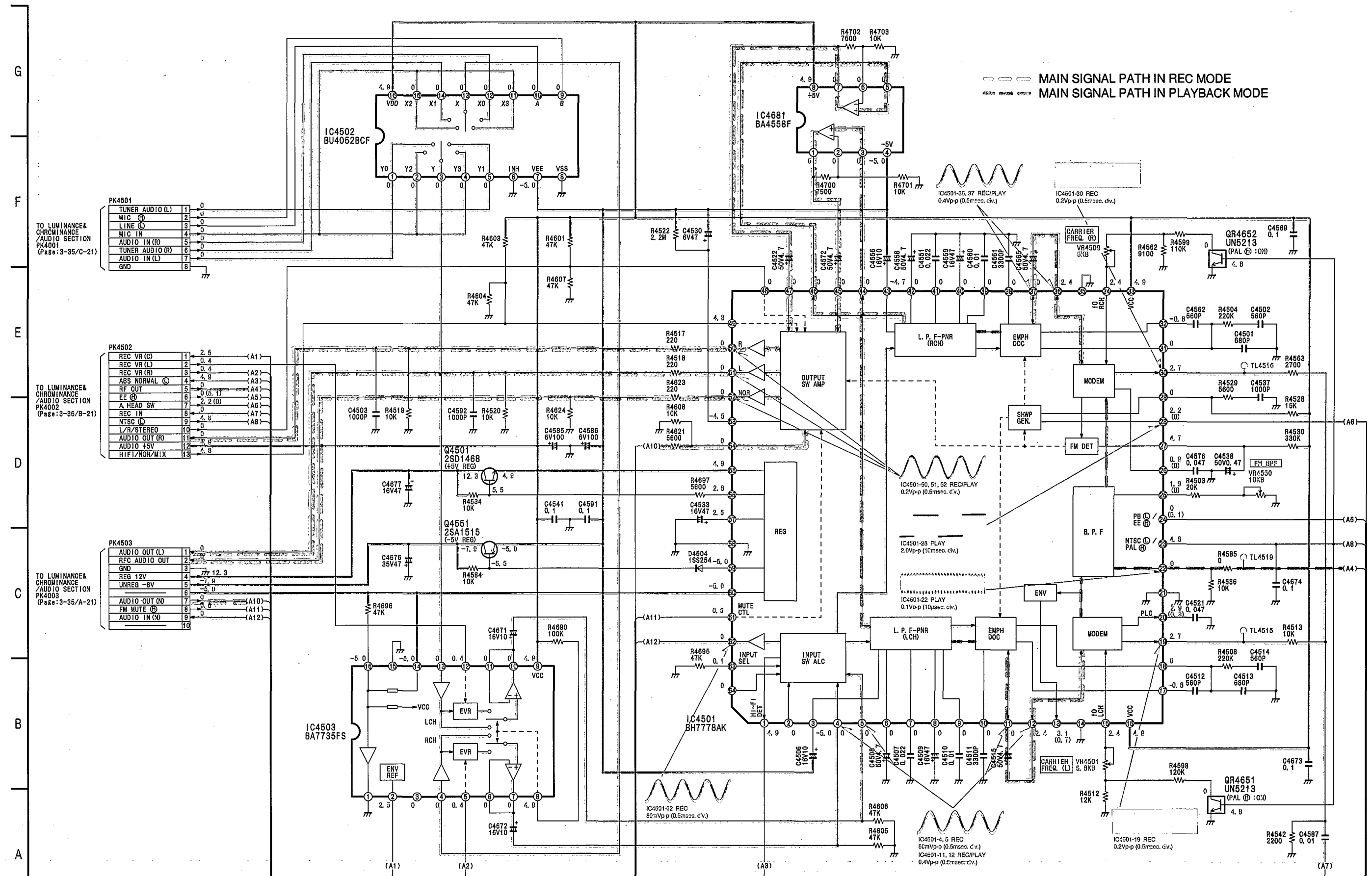
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



3-11. OSD SECTION IN MAIN SCHEMATIC DIAGRAM



3-12. HI-FI AUDIO PACK SCHEMATIC DIAGRAM

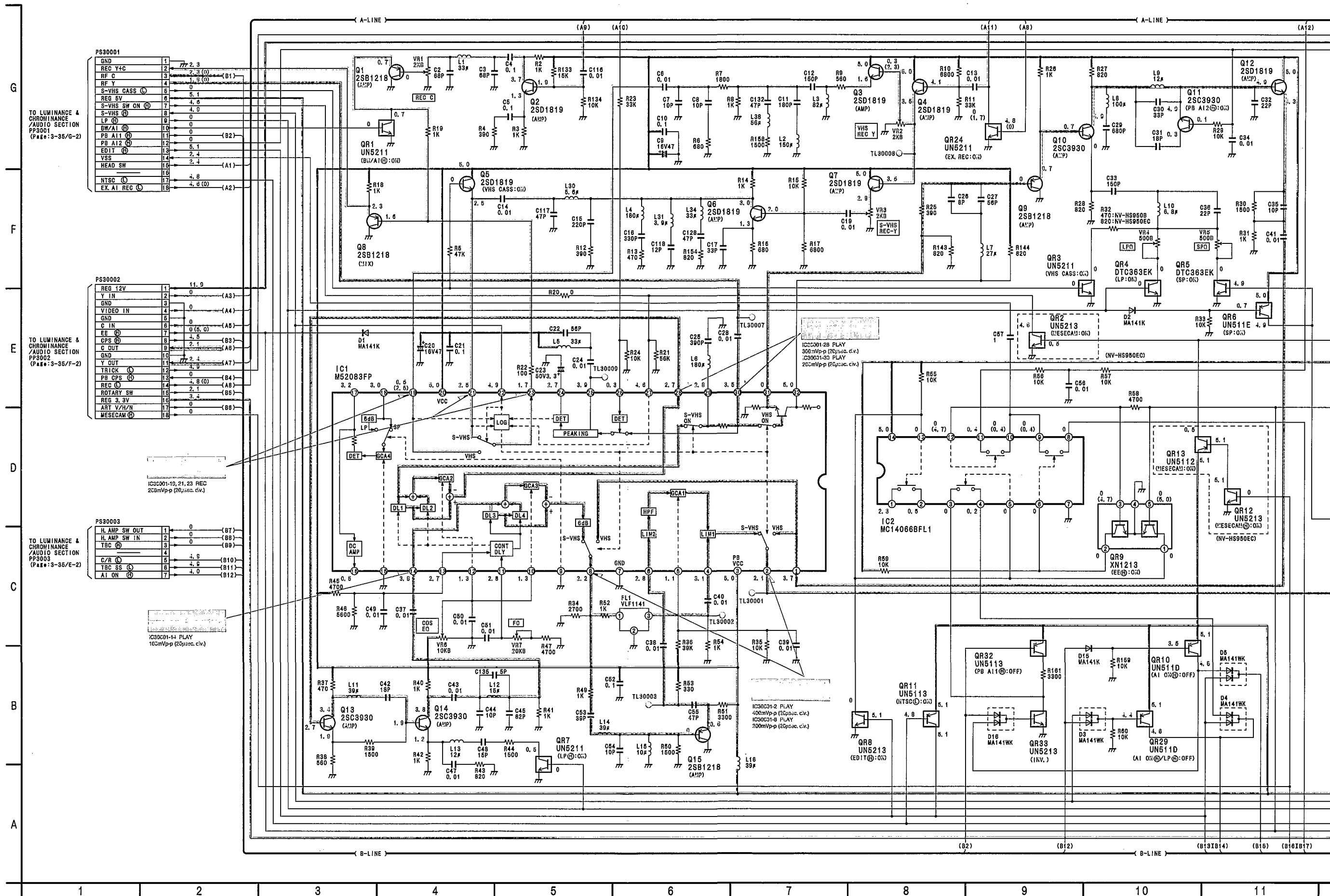


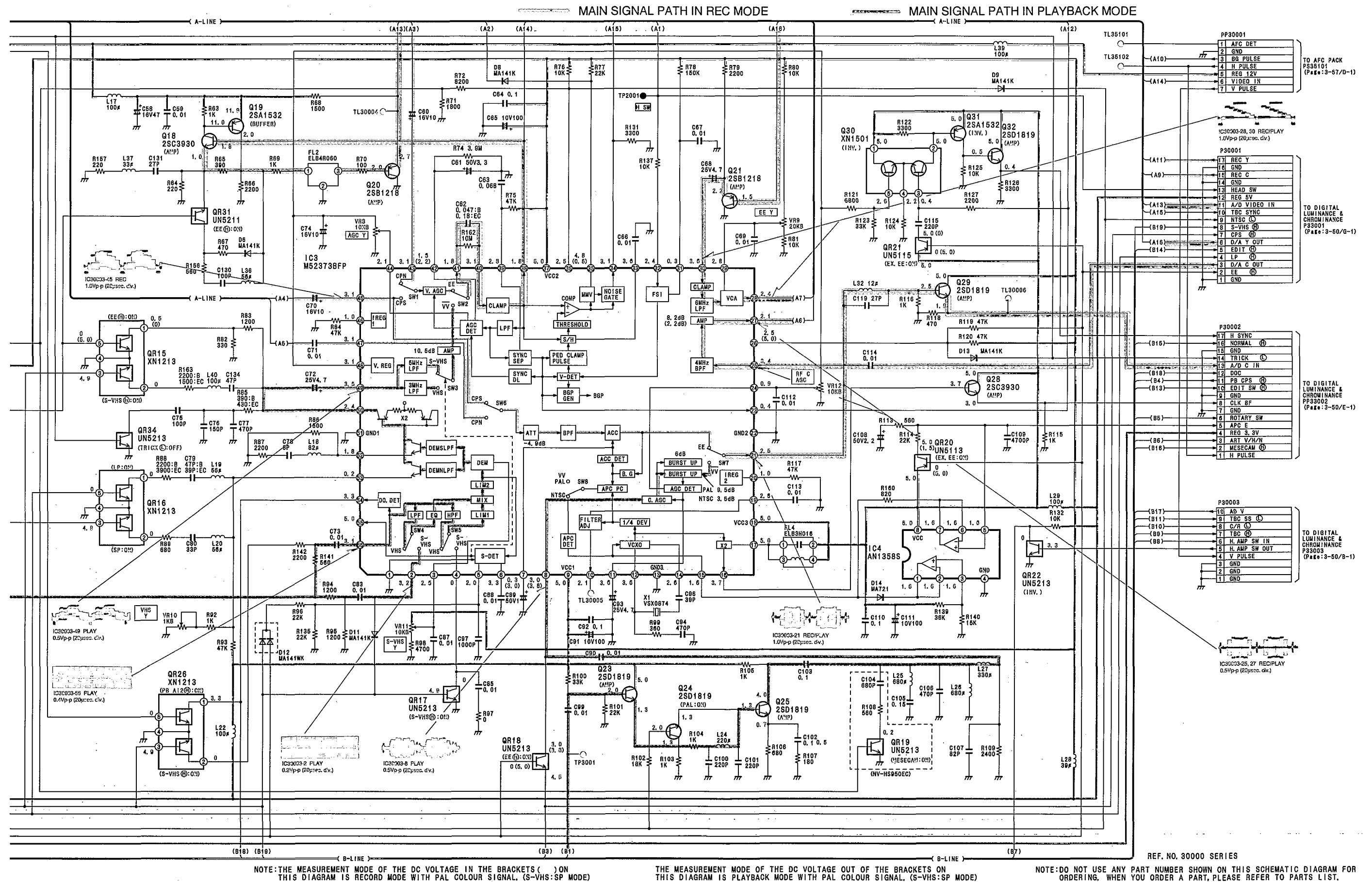
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (S-VHS:SP MODE) LINE IN SIGNAL LEVEL... -10dB 1kHz

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (S-VHS:SP MODE) LINE IN SIGNAL LEVEL... -10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

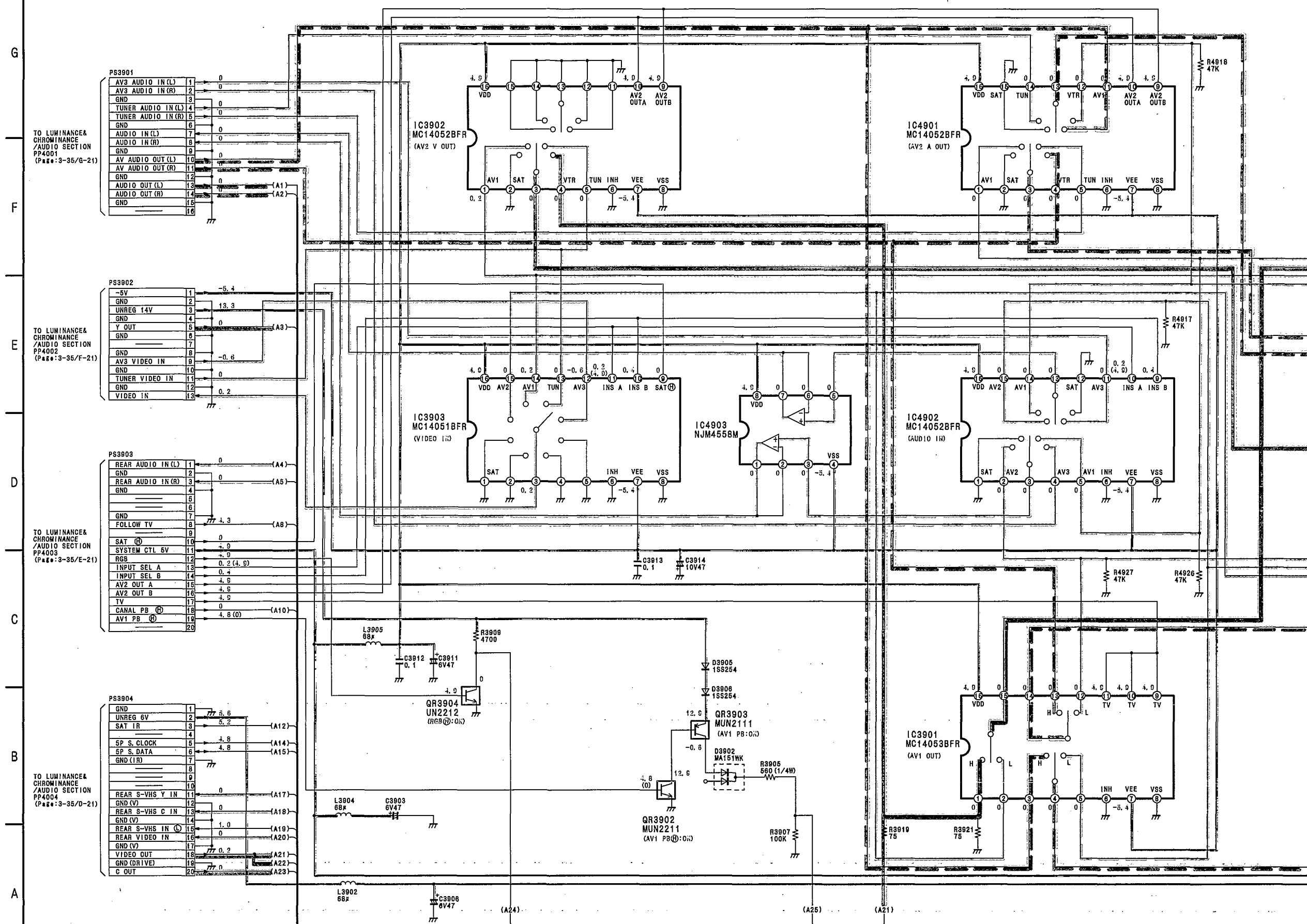
3-13. ANALOGUE LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM [REF. NO. 30000 SERIES]



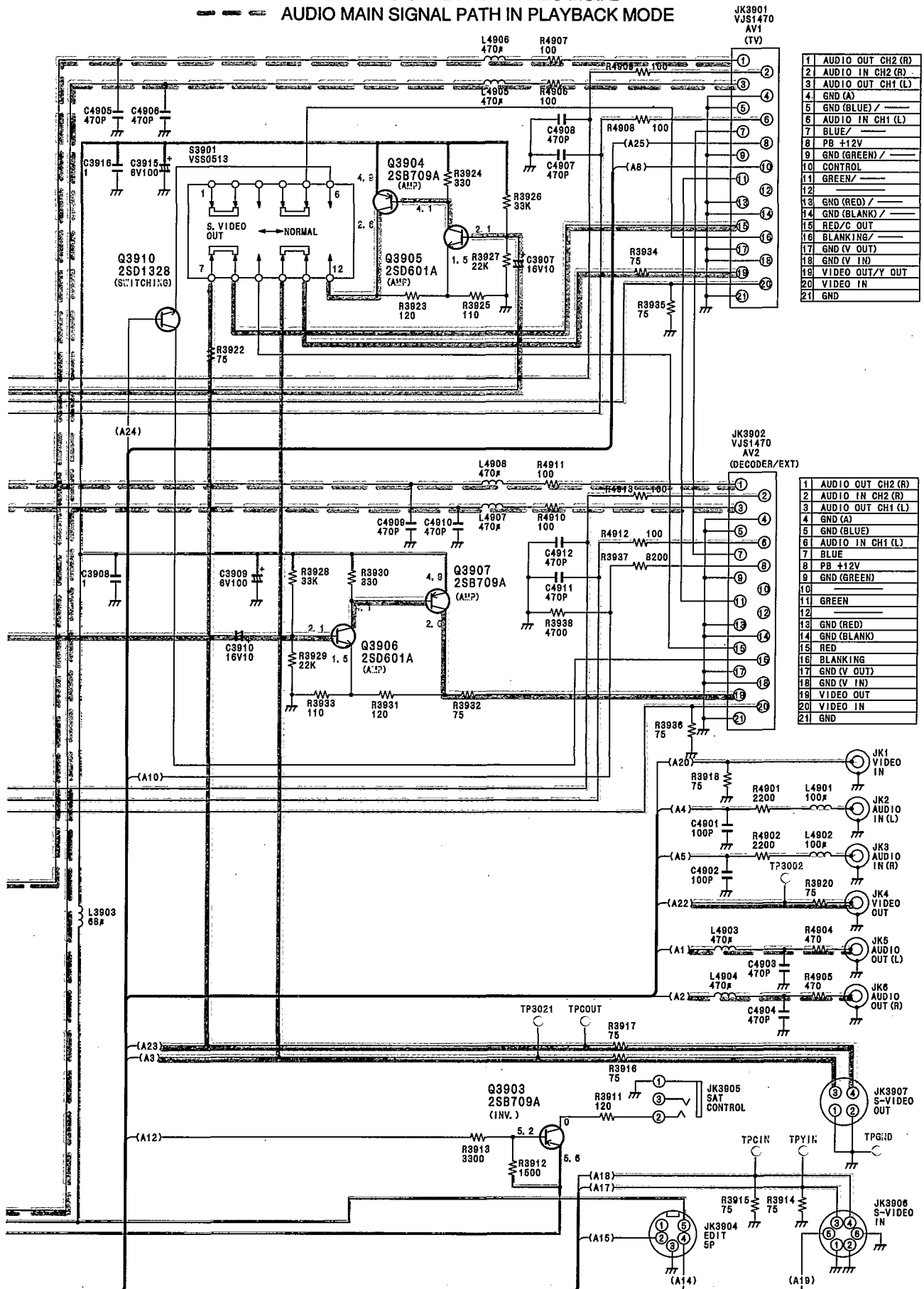


3-14. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM

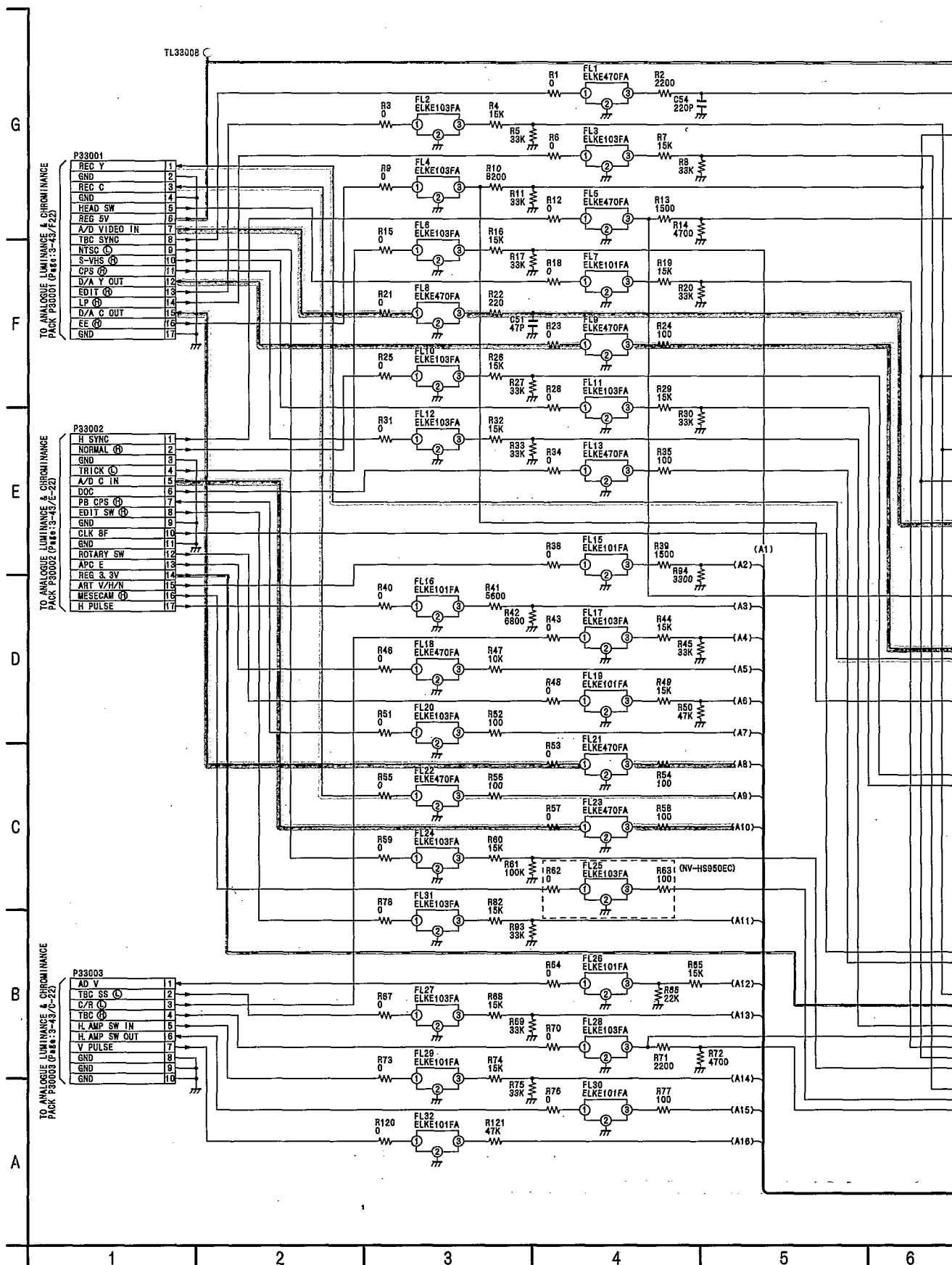
VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

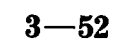


--- AUDIO MAIN SIGNAL PATH IN REC MODE
 --- AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



3-15. DIGITAL LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM [REF. NO. 33000 SERIES]

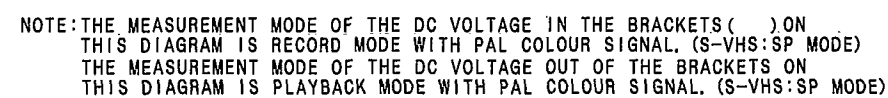




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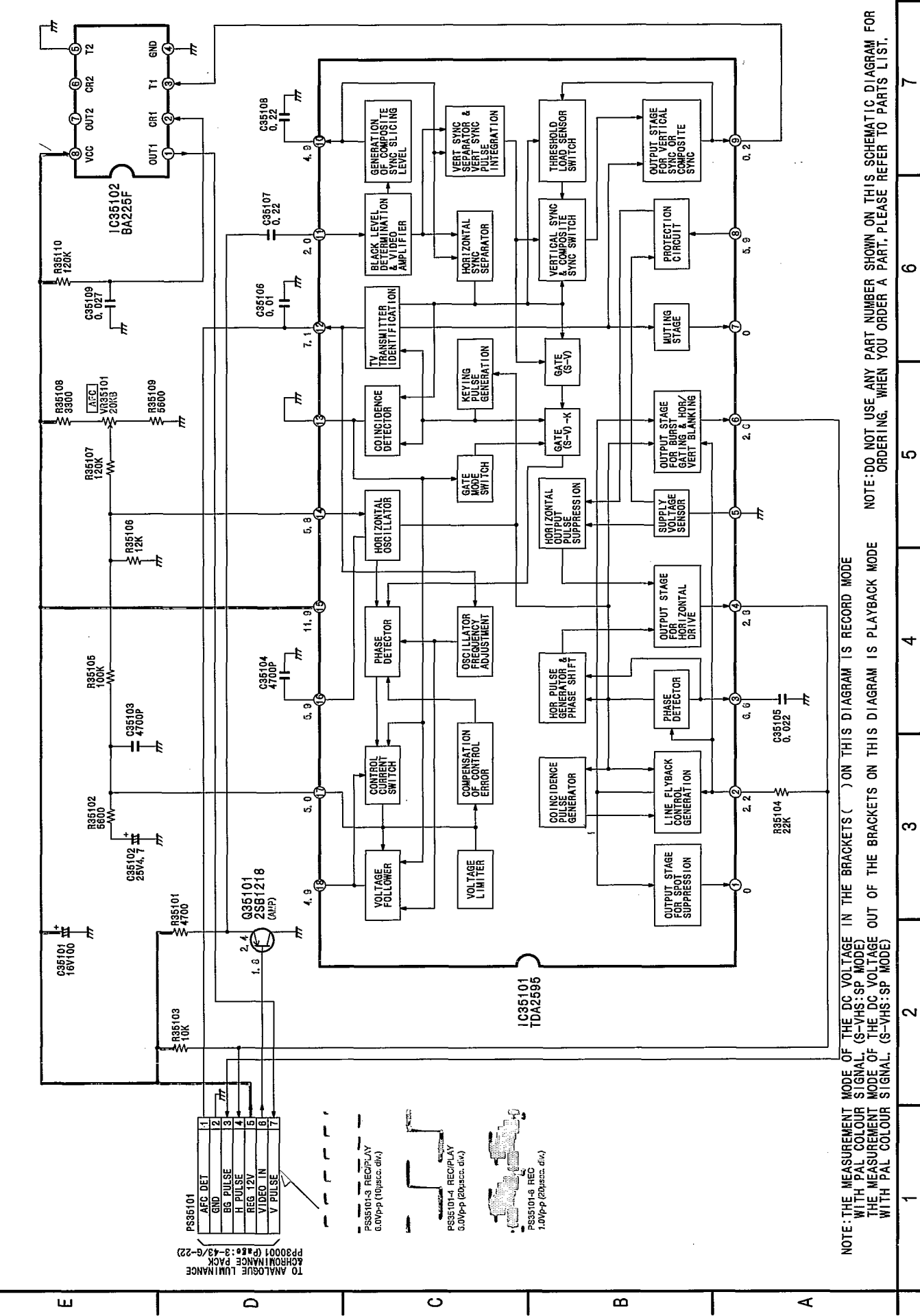




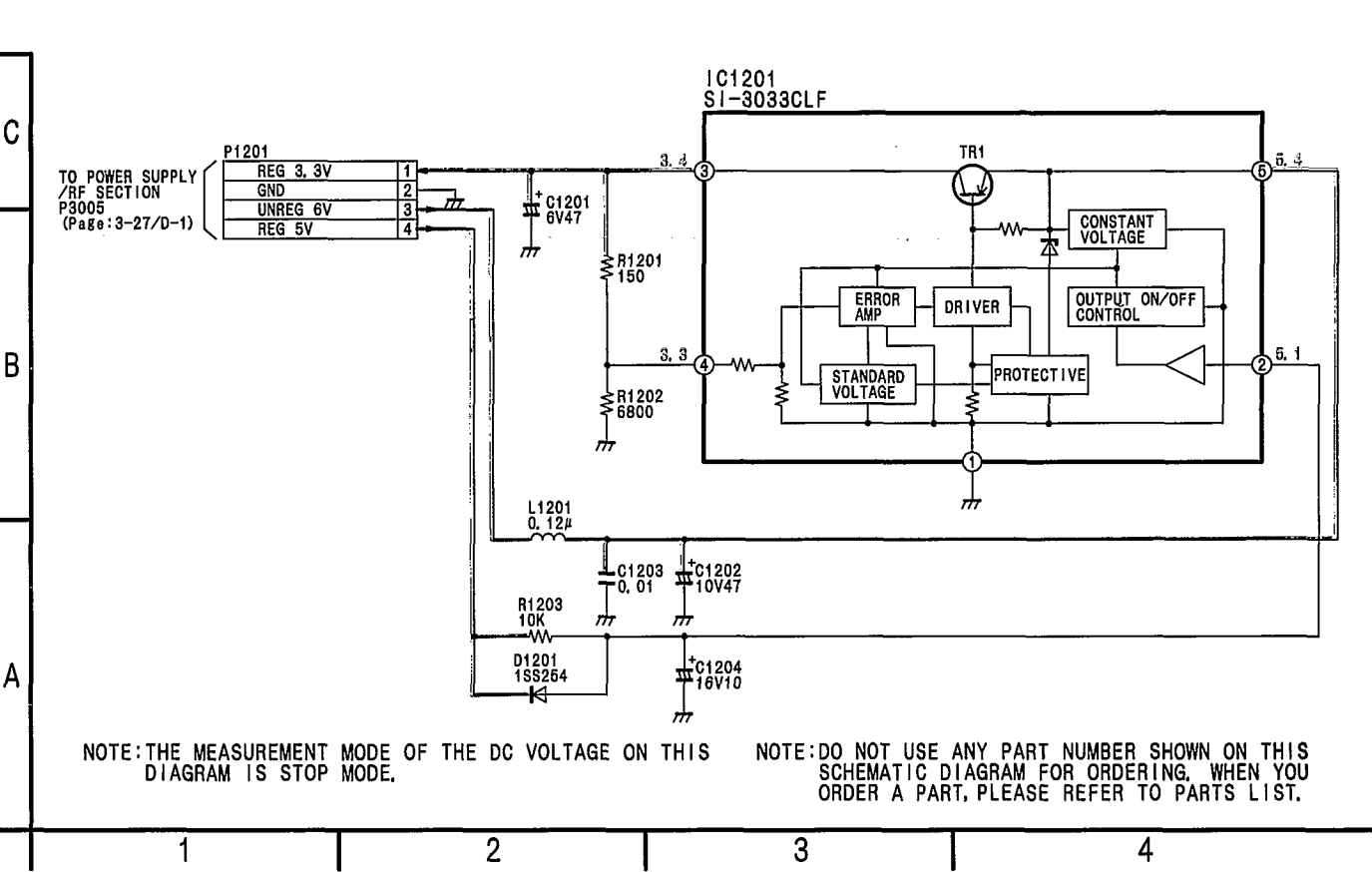



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

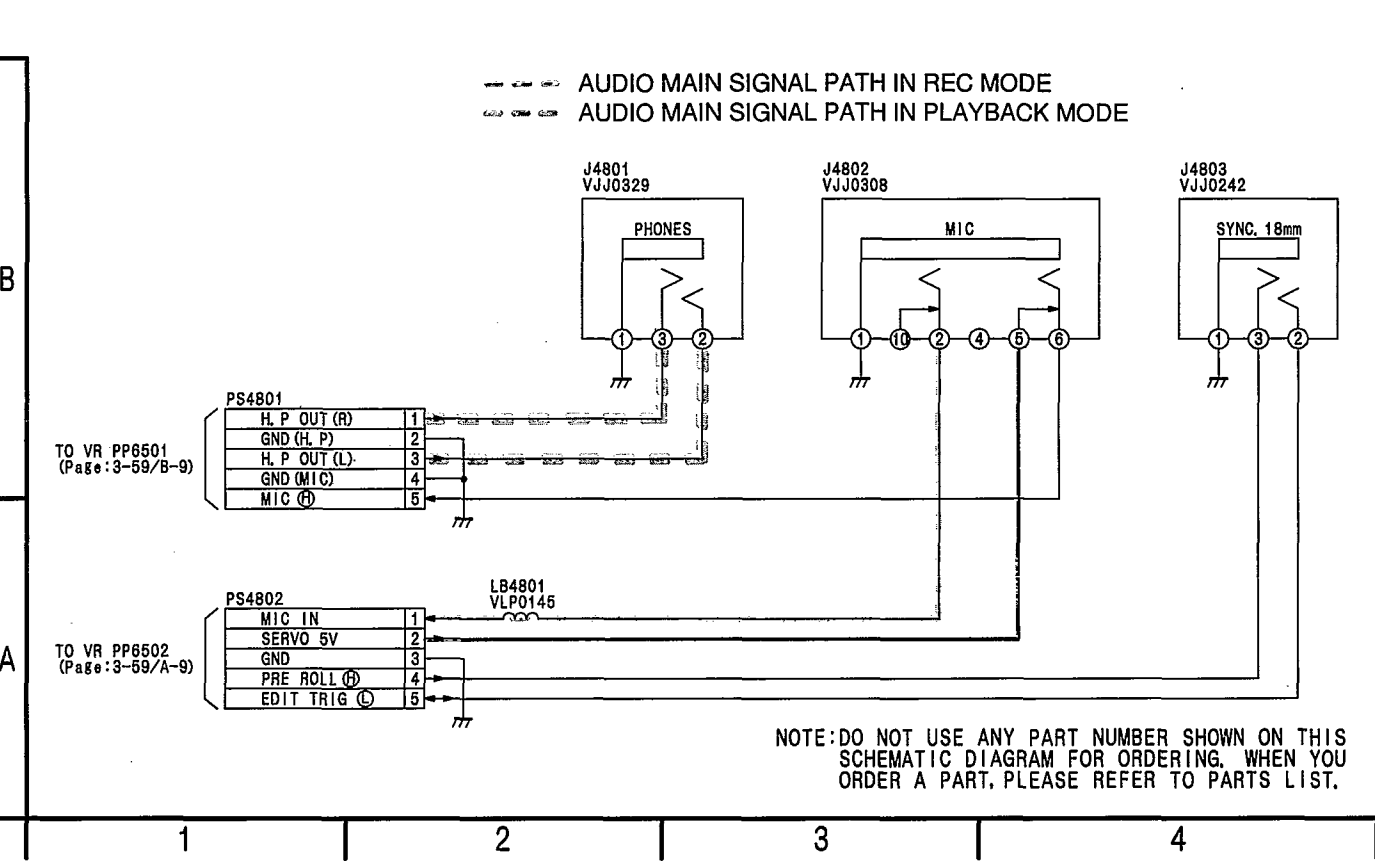
3-17. AFC PACK SCHEMATIC DIAGRAM



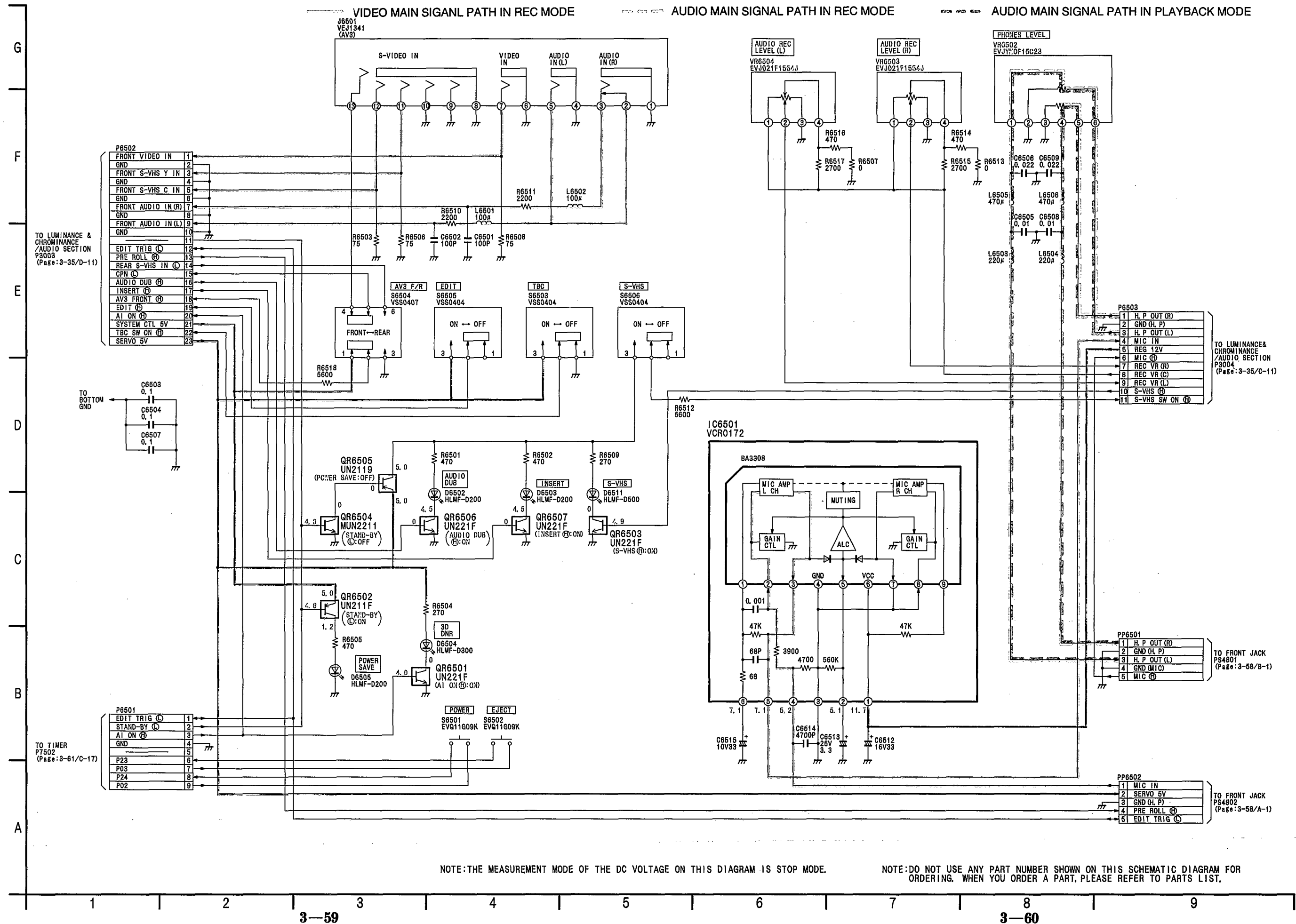
3-18. SUB POWER SCHEMATIC DIAGRAM



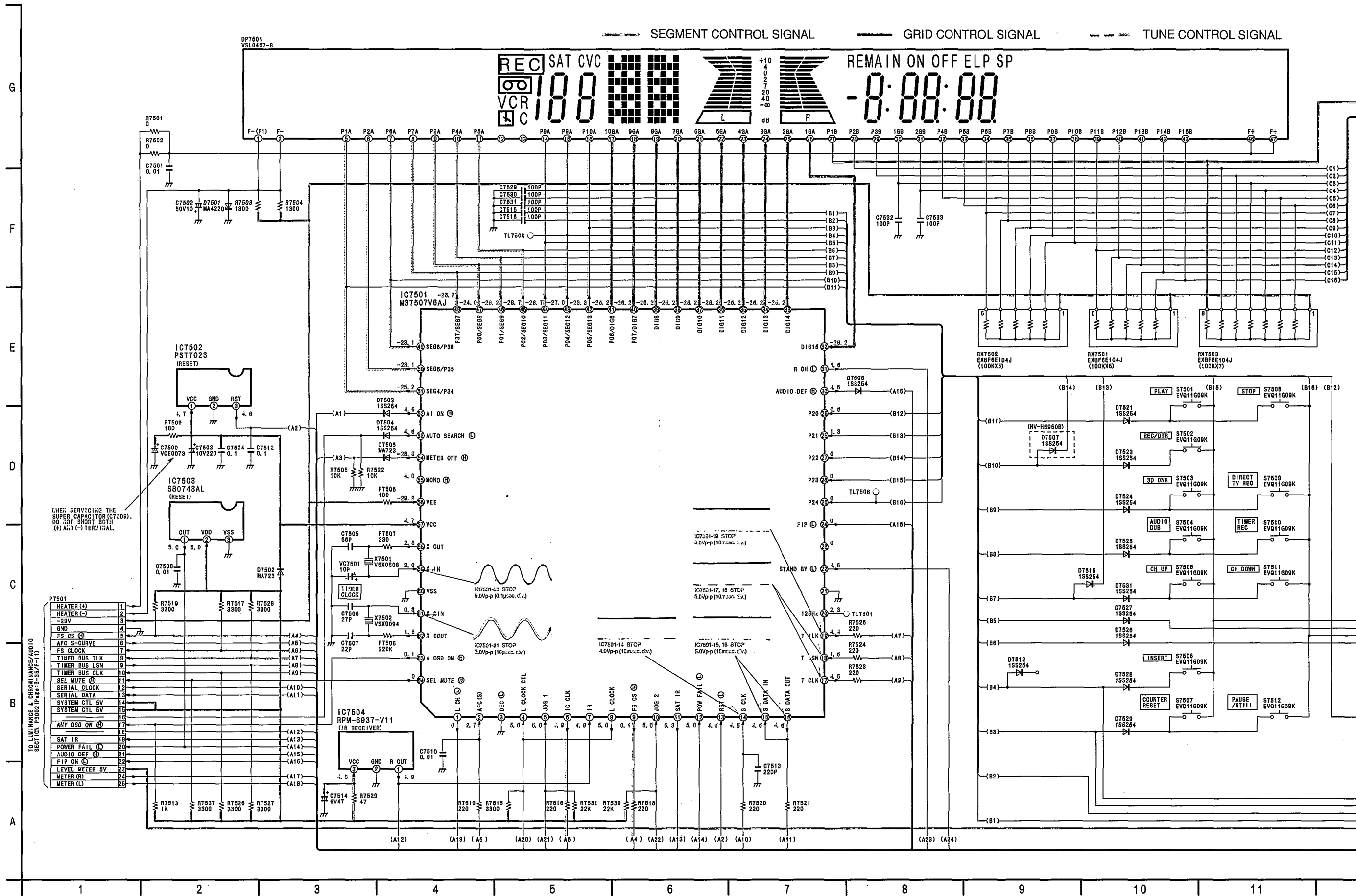
3-19. FRONT JACK SCHEMATIC DIAGRAM

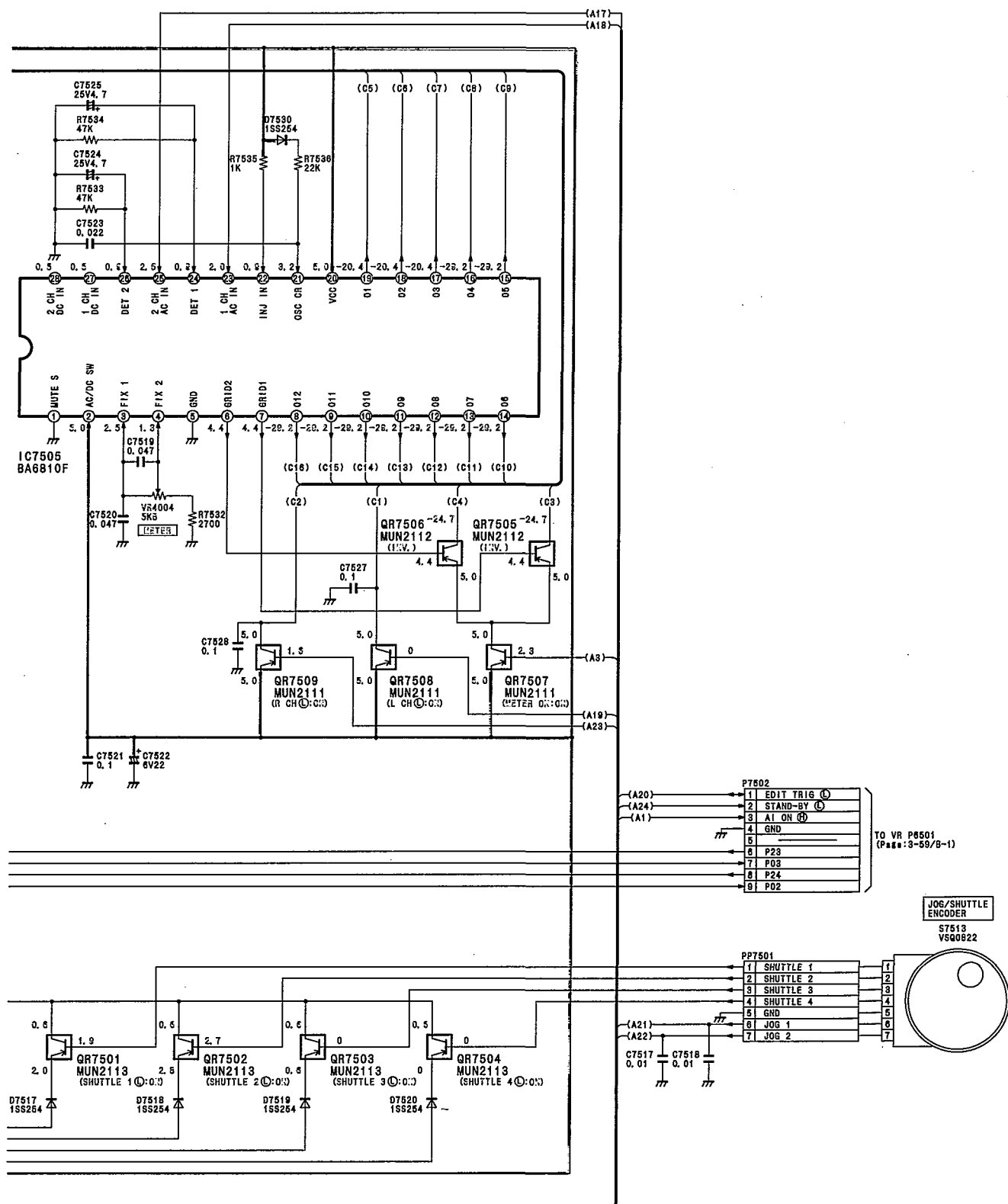


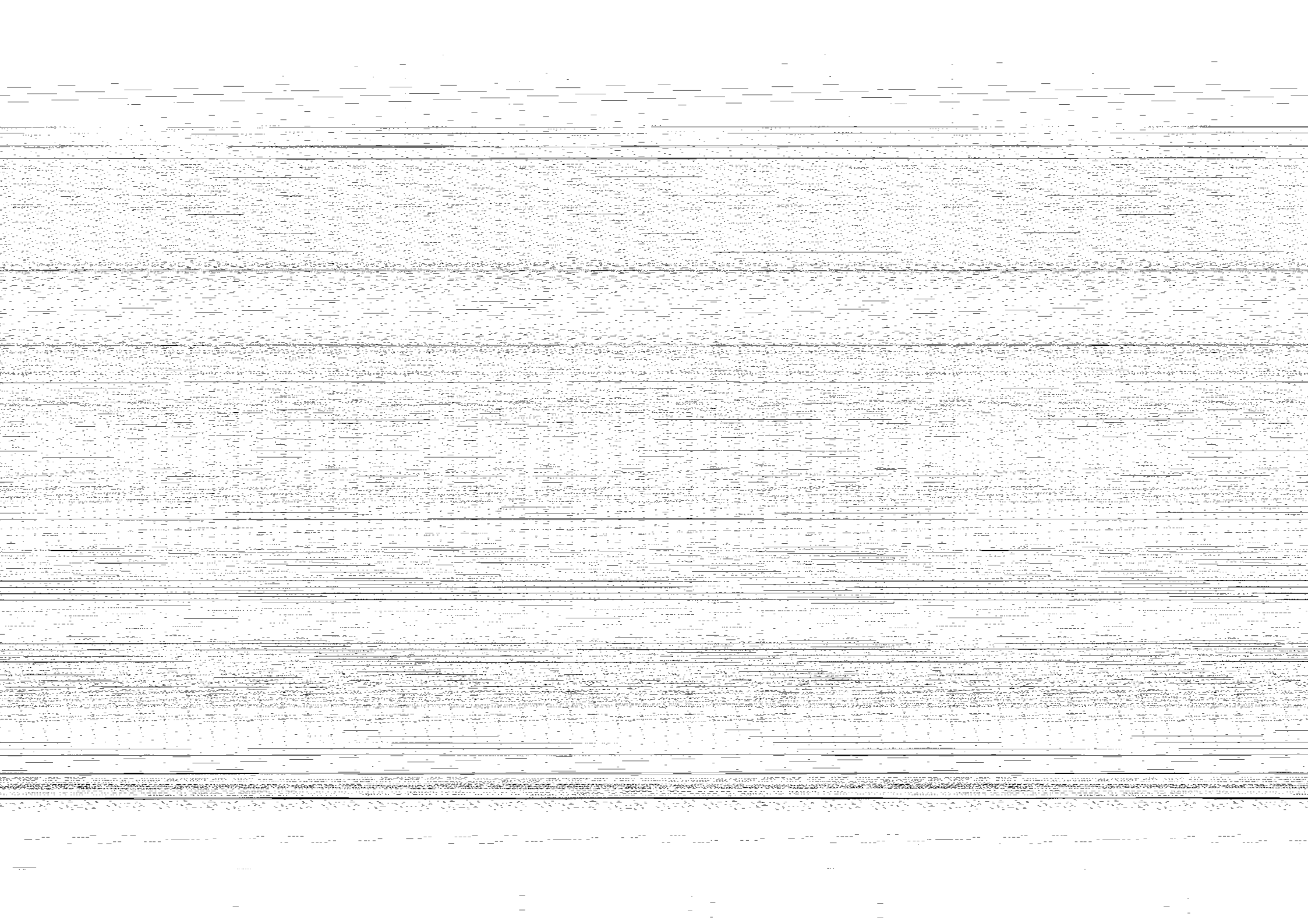
3-20. VR SCHEMATIC DIAGRAM



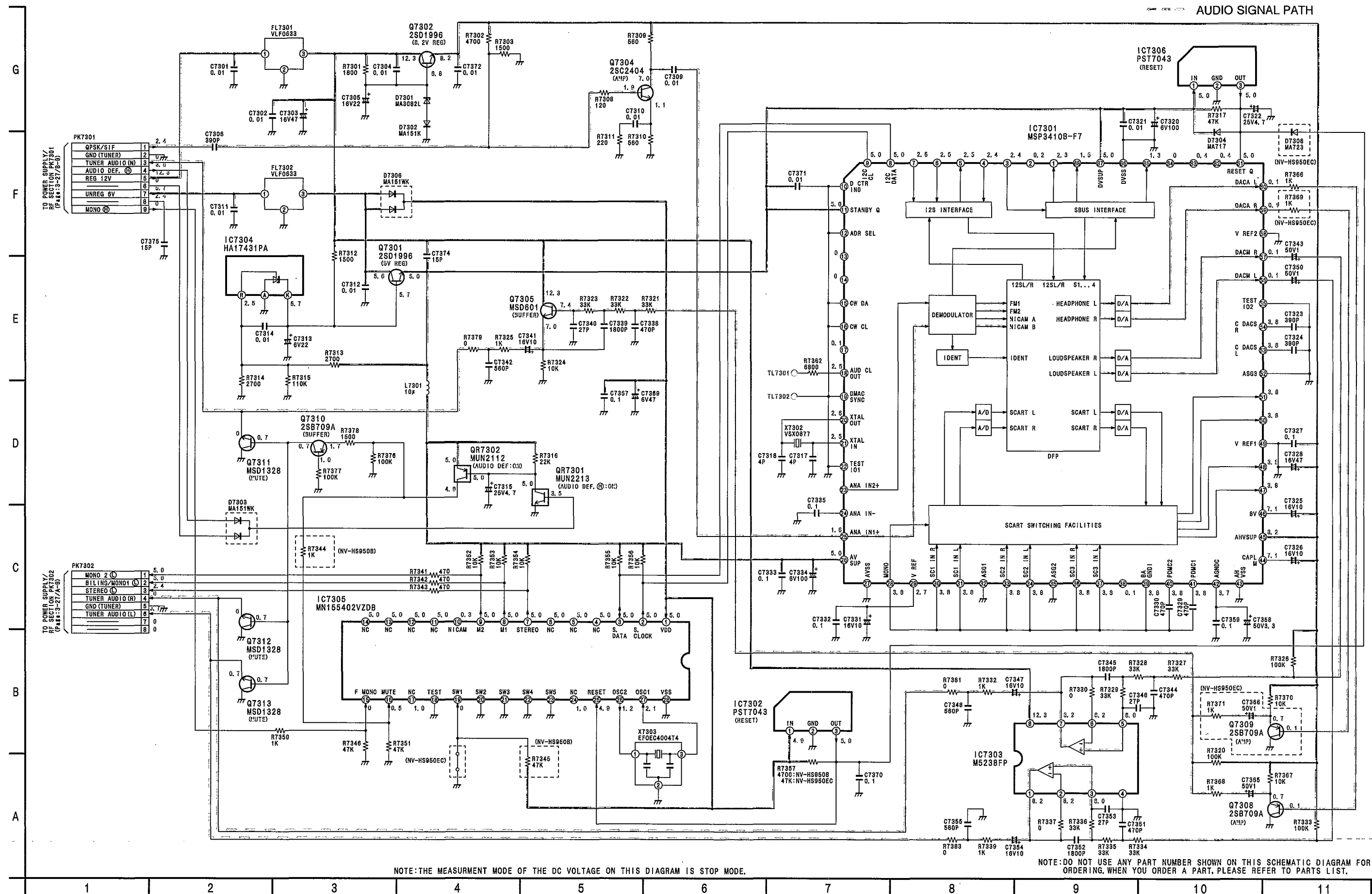
3-21. TIMER SCHEMATIC DIAGRAM.



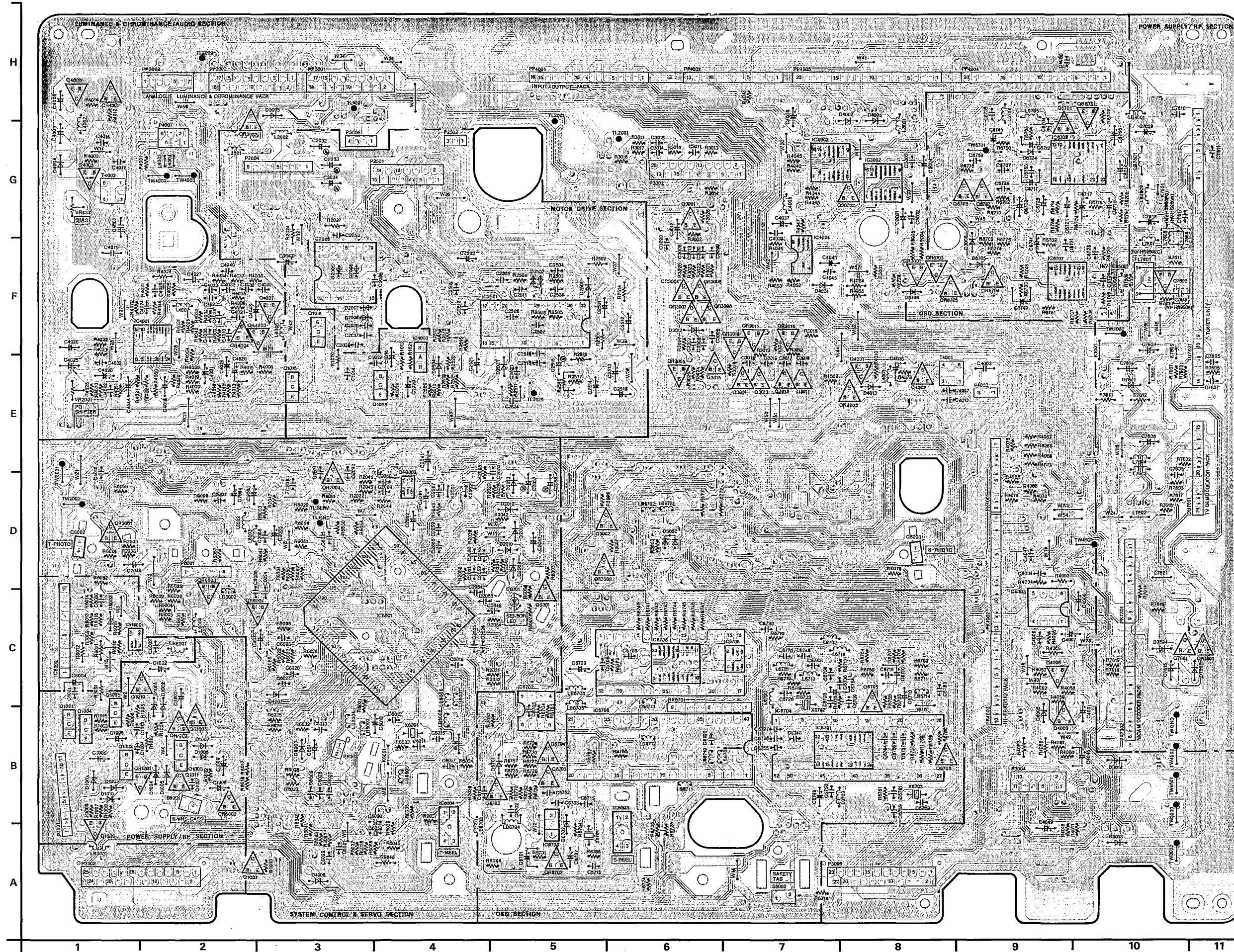




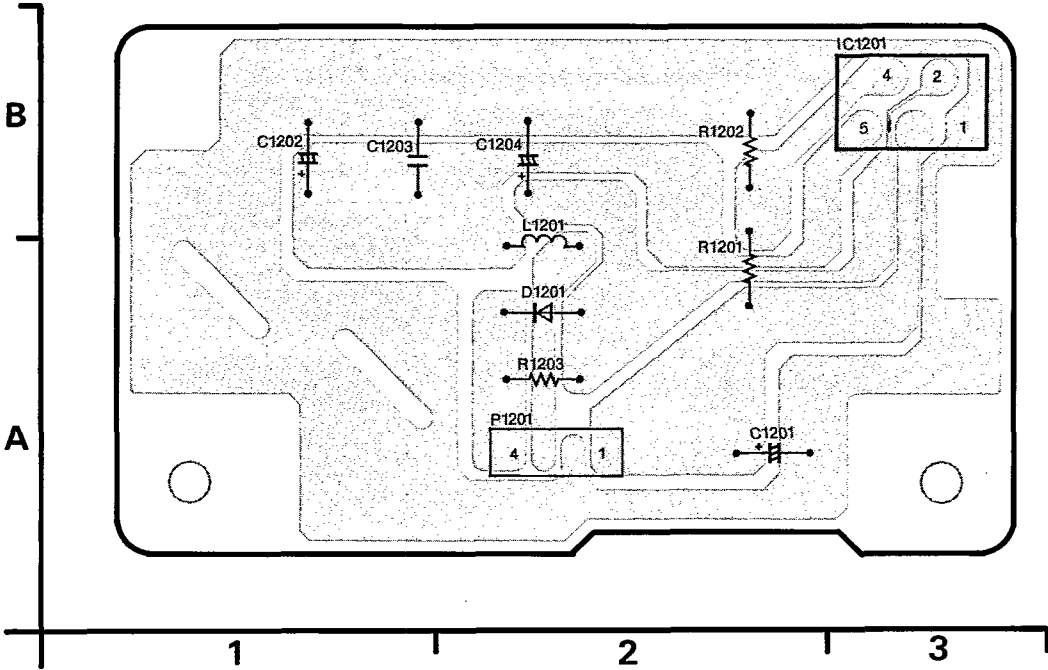
3-23. NICAM DECODER PACK SCHEMATIC DIAGRAM



3-24. MAIN C.B.A. (VEP06B83B: NV-HS950B) (VEP06B83C: NV-HS950EC)



3-25. SUB POWER C.B.A. (VEP01804A)



SUB POWER C.B.A.	
Integrated Circuit	
IC1201	B-3
Connector	
P1201	A-2

ADDRESS INFORMATION

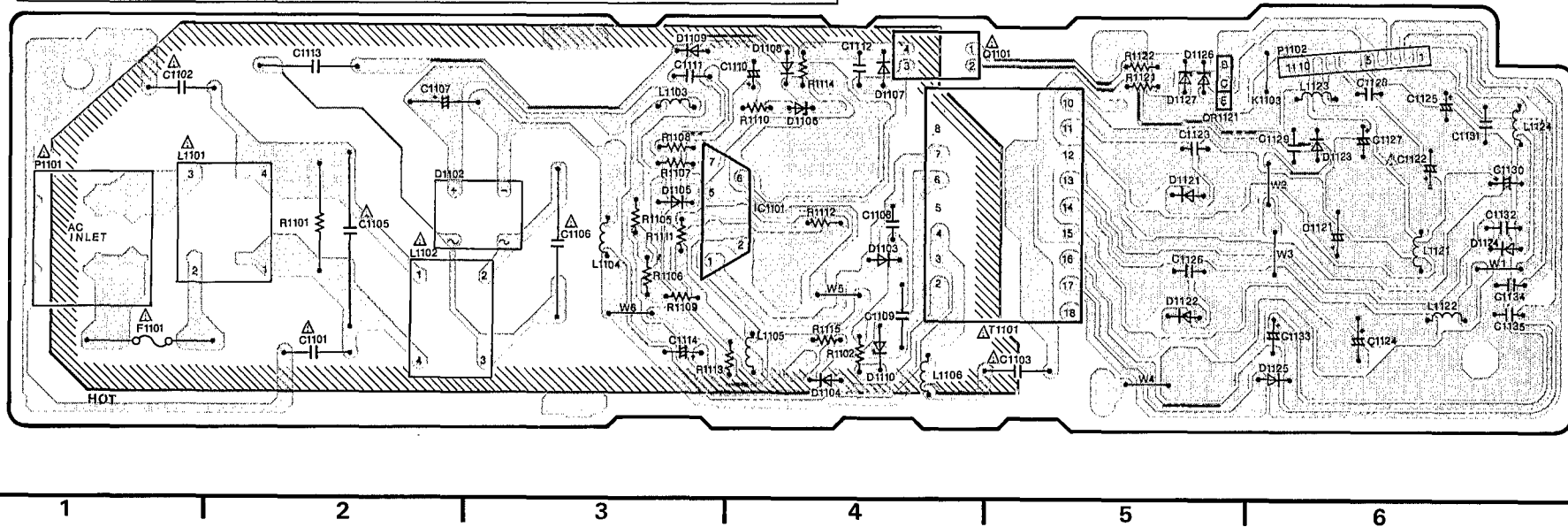
MAIN C.B.A.															
Transistor		Q6003		D-8		QR4002		E-8		IC6705		C-7		Connector	
Q1001	B-1	Q6701	H-9			QR4003	F-2			IC6706	B-5			DU7601	D-10
Q1002	B-1	Q6702	B-5			QR4004	F-2			IC6707	F-9			P1001	B-1
Q1003	B-2	Q6703	B-5			QR6001	C-1			IC6708	C-6			P2004	G-2
Q1004	B-1	Q6704	B-5			QR6002	B-2			IC6709	G-9			P2501	G-3
Q1005	B-1	Q6705	C-8			QR6003	D-2			IC6710	C-6			P2502	G-4
Q1006	A-1	Q6706	B-8			QR6004	C-2			Test Point				P3001	G-6
Q1007	A-2	Q6707	G-9			QR6701	H-10			TL1001	H-3			P3002	A-1
Q1009	E-3	Q6708	G-9			QR6702	A-5			TL2001	G-6			P3003	A-8
Q1010	C-1	Q7601	C-10			QR6703	F-8			TL2009	H-2			P3004	B-9
Q1011	B-2	Q7602	F-10			QR6704	F-9			TL2026	E-5			P3005	G-3
Q1015	E-3	Transistor & Resistor				QR6705	E-8			TL3001	H-5			P4001	G-2
Q1016	F-3					QR7601	C-11			TLGND	D-3			P4002	E-9
Q3001	G-6	QR1001	B-2			Integrated Circuit				TLSERV	D-3			P6001	D-2
Q3002	D-5	QR1002	B-2			IC1002	F-4			TW1003	F-10			P6002	B-3
Q3003	G-8	QR1003	B-2			IC2002	F-3			TW2002	D-1			PK4001	D-9
Q3011	E-7	QR2001	D-1			IC2501	F-5			TW3030	B-10			PK4002	C-9
Q3012	E-7	QR2003	D-4			IC3002	G-8			TW3031	D-1			PK4003	B-9
Q3013	E-7	QR2004	D-3			IC4001	F-2			TW3032	A-10			PK7301	C-10
Q3014	E-7	QR3001	F-8			IC4002	G-7			TW4002	G-2			PK7302	B-10
Q3015	E-6	QR3002	G-2			IC4003	D-9			TW4003	G-2			PP3001	H-3
Q4001	E-8	QR3003	D-5			IC4004	G-7			TW4502	B-10			PP3002	H-2
Q4002	E-8	QR3006	F-6			IC6001	C-4			TW4507	B-10			PP3003	H-2
Q4003	G-1	QR3007	F-6			IC6002	C-1			TW4521	D-10			PP4001	H-5
Q4006	H-1	QR3008	F-6			IC6003	B-6			TW6701	G-9			PP4002	H-6
Q4007	F-3	QR3009	E-6			IC6004	B-4			TWGND	B-10			PP4003	H-7
Q4008	C-9	QR3011	F-7			IC6701	B-7			Adjustment				PP4004	H-9
Q4009	B-9	QR3015	F-7			IC6702	C-5							TU7601	F-10
Q6001	C-5	QR3016	F-7			IC6703	A-5			VR2001	E-1				
Q6002	D-1	QR4001	H-1			IC6704	B-7			VR4001	G-1				

ADDRESS INFORMATION

POWER C.B.A.	
Transistor	
Q1101	B-4
Transistor & Resistor	
QR1121	B-5
Integrated Circuit	
IC1101	A-3
Connector	
P1101	B-1
P1102	B-6

ADDRESS INFORMATION

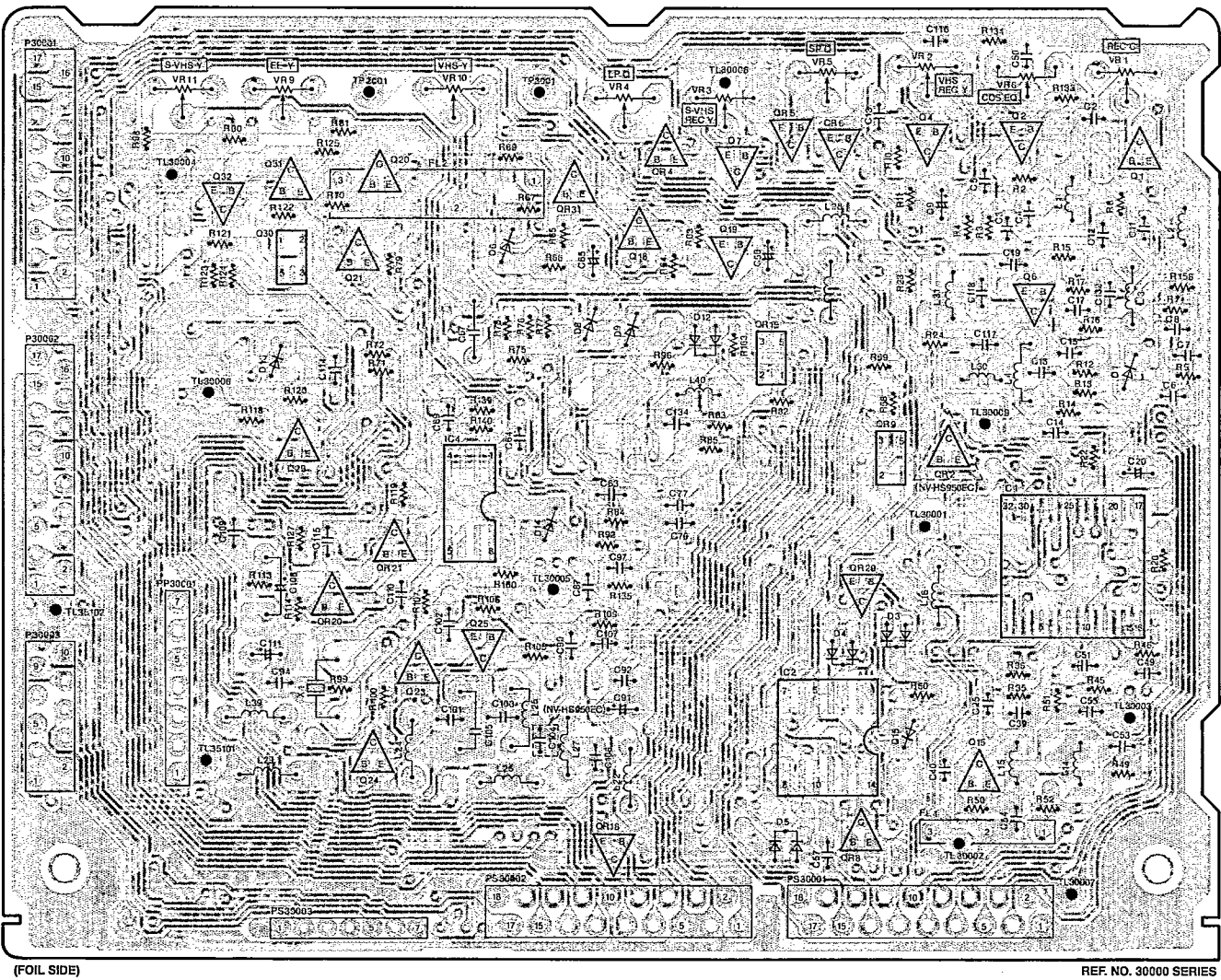
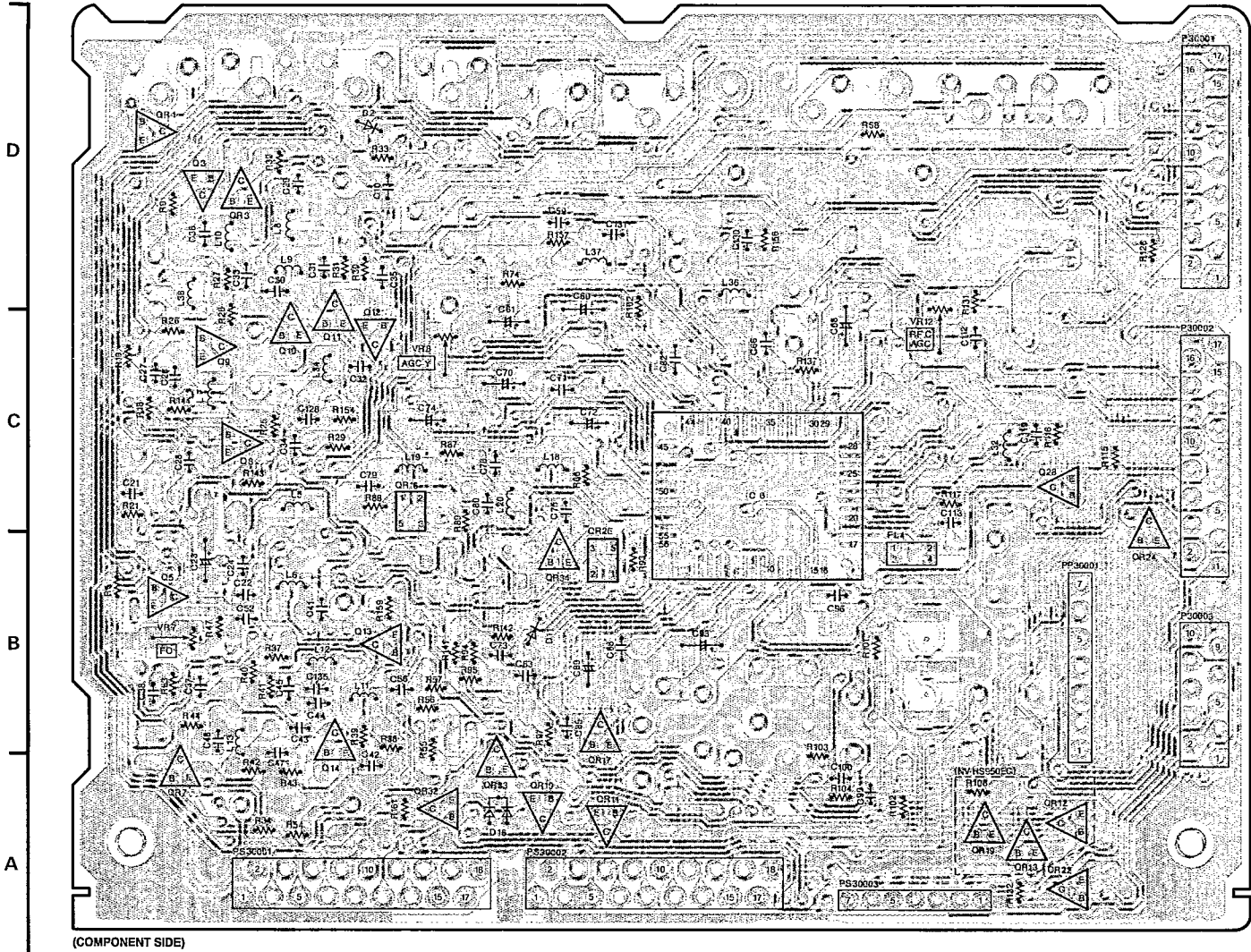
CAUTION THE RED MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT. PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.



3-27. ANALOGUE LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03D76B: NV-HS950B) (VEP03D76A: NV-HS950EC)
[REF. NO. 30000 SERIES]

ANALOGUE LUMINANCE & CHROMINANCE PACK C.B.A.													
Transistor		Q30018		D-9		Transistor & Resistor		QR30017		A-3		Integrated Circuit	
Q30001	D-11	Q30019	D-9	QR30001	D-1	QR30017	A-9	IC30001	C-11	TL35101	B-7	VR30011	D-7
Q30002	D-11	Q30020	D-8	QR30002	C-10	QR30018	A-5	IC30002	B-10	TL35102	B-7	VR30012	C-5
Q30003	D-1	Q30021	D-8	QR30003	D-1	QR30020	B-8	IC30003	C-4	TP2001	D-8	Connector	
Q30004	D-10	Q30023	B-8	QR30004	D-9	QR30021	B-8	IC30004	C-8	TP3001	D-8	P30001	D-6
Q30005	B-1	Q30024	A-8	QR30005	D-10	QR30022	A-5	Test Point		Adjustment		P30002	C-6
Q30006	D-11	Q30025	B-8	QR30006	D-10	QR30024	B-6	TL30001	C-10	VR30001	D-11	P30003	B-6
Q30007	D-9	Q30028	C-5	QR30007	A-1	QR30026	B-3	TL30002	A-10	VR30002	D-10	PP30001	B-5
Q30008	C-1	Q30029	C-7	QR30008	A-10	QR30029	B-10	TL30003	B-11	VR30003	D-9	PS30001	B-7
Q30009	C-1	Q30030	D-7	QR30009	C-10	QR30031	D-9	TL30004	D-7	VR30004	D-9	PS30001	A-2
Q30010	C-2	Q30031	D-7	QR30010	A-3	QR30032	A-2	TL30005	B-9	VR30005	D-10	PS30001	A-10
Q30011	C-2	Q30032	D-7	QR30011	A-3	QR30033	A-3	TL30006	C-7	VR30006	D-11	PS30002	A-3
Q30012	C-2			QR30012	A-5	QR30034	B-3	TL30007	A-11	VR30007	B-1	PS30002	A-8
Q30013	B-2			QR30013	A-5			TL30008	D-9	VR30008	C-2	PS30003	A-4
Q30014	A-2			QR30015	C-10			TL30009	C-11	VR30009	D-7	PS30003	A-8
Q30015	B-10			QR30016	C-2					VR30010	D-8		

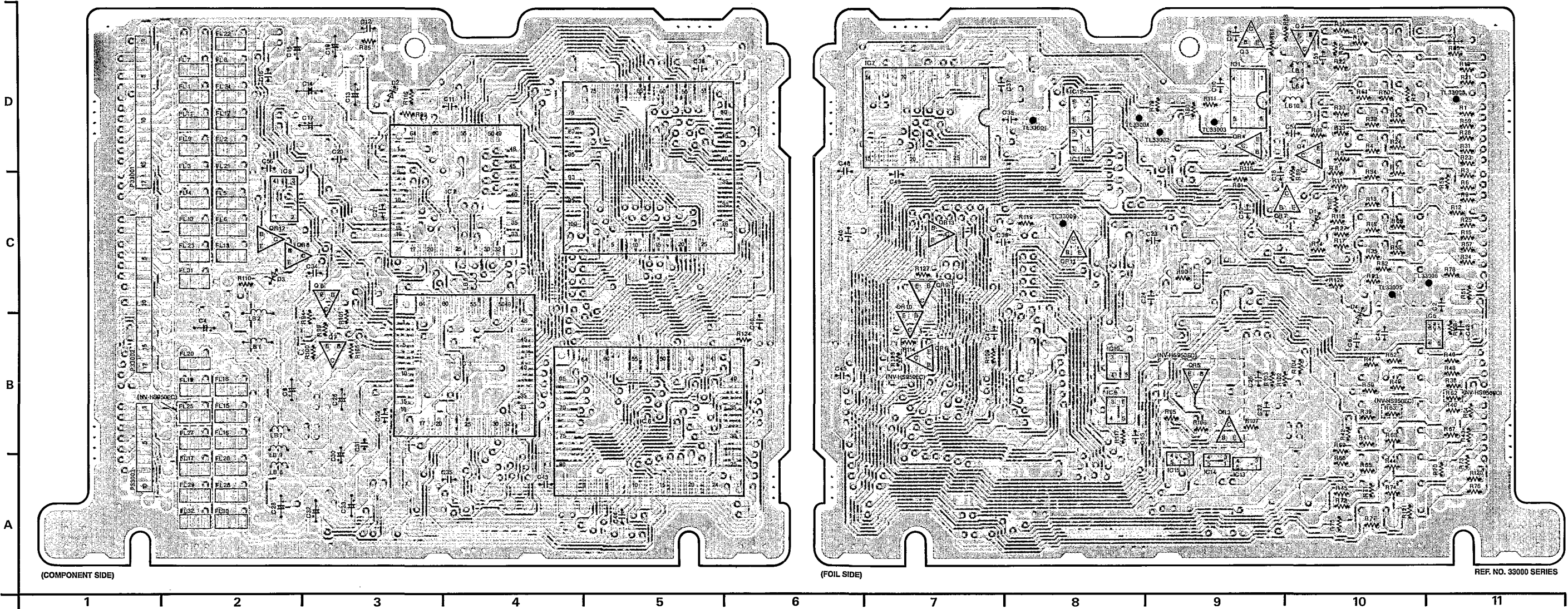
ADDRESS INFORMATION



3-28. DIGITAL LUMINANCE & CHROMINANCE C.B.A. (VEP03D75B: NV-HS950B) (VEP03D75A: NV-HS950EC)
[REF. NO. 33000 SERIES]

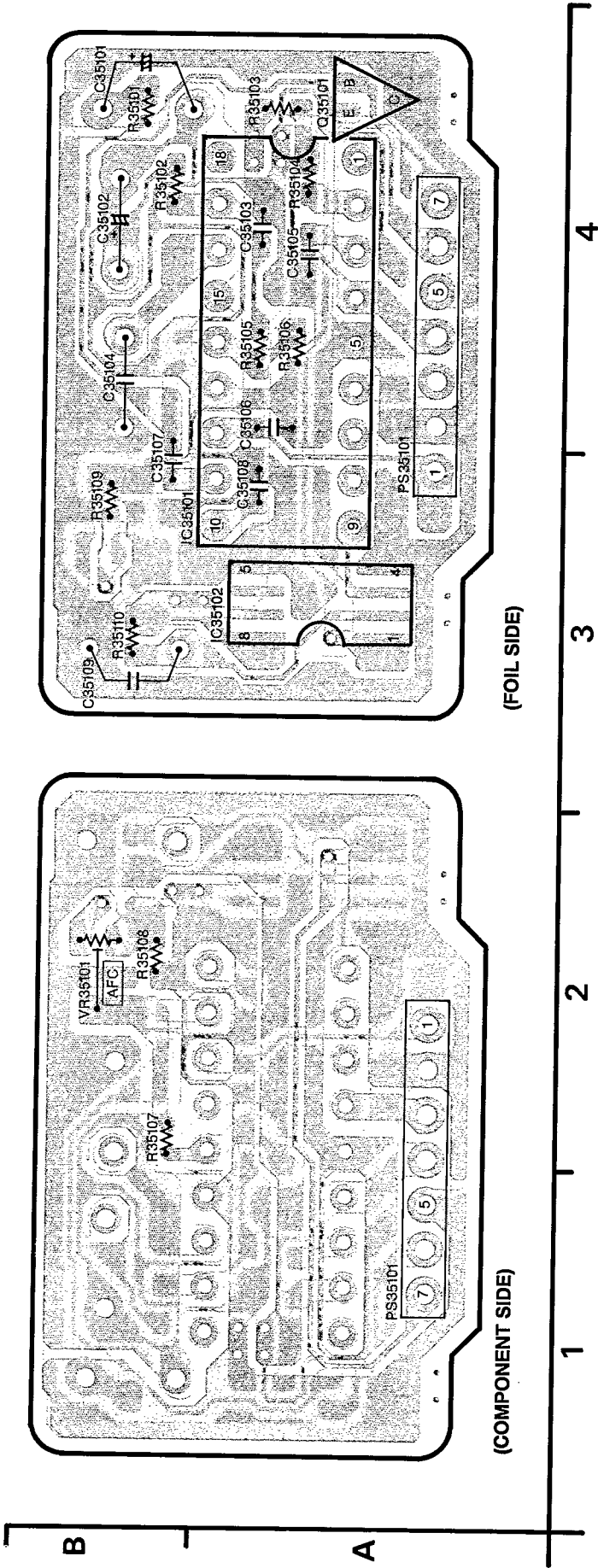
DIGITAL LUMINANCE & CHROMINANCE C.B.A.									
Transistor		QR33007	C-9	IC33005	B-11	Test Point			
Q33002	D-10	QR33008	C-2	IC33006	B-5	TL33001	D-8		
Q33003	D-9	QR33009	C-7	IC33007	D-7	TL33002	D-9		
Q33004	D-10	QR33010	B-7	IC33008	C-2	TL33003	D-9		
Q33006	C-3	QR33011	C-8	IC33009	B-8	TL33004	D-8		
Q33007	B-3	QR33012	C-2	IC33010	B-8	TL33008	D-11		
		QR33013	C-7	IC33011	D-8	TL33009	C-8		
				IC33012	D-8				
Transistor & Resistor		Integrated Circuit			IC33013	A-9	Connector		
QR33003	B-9	IC33001	D-9	IC33014	A-9	P33001	C-1		
QR33004	D-9	IC33002	C-4	IC33015	A-9	P33002	B-1		
QR33005	B-9	IC33003	B-4			P33003	A-1		
QR33006	B-7	IC33004	D-5						

ADDRESS INFORMATION



AFC PACK C.B.A.			
Transistor		Adjustment	
Q35101	A-4	VR35101	B-2
Integrated Circuit		Connector	
IC35101	A-3	PS35101	A-1
IC35102	A-3	PS35101	A-3

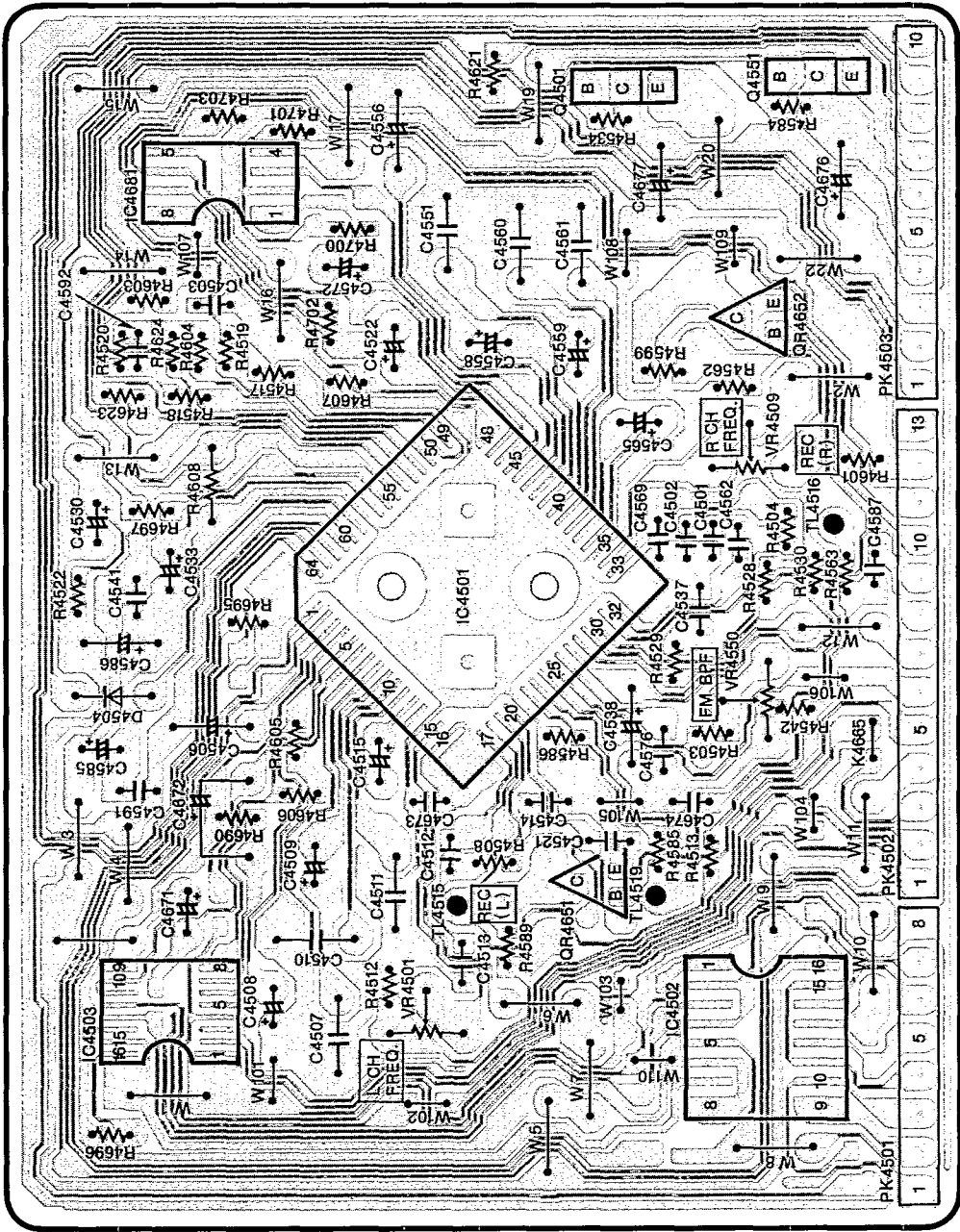
ADDRESS INFORMATION



3-30. HI-FI AUDIO PACK C.B.A. (VEP04664C)

HI-FI AUDIO PACK C.B.A.	
Transistor	
Q4501	B-3
Q4551	A-3
Transistor & Resistor	
QR4651	B-2
QR4652	A-3
Integrated Circuit	
IC4501	B-2
IC4502	A-1
IC4503	C-1
IC4681	O-3
Test Point	
TL4515	B-1
TL4516	A-2
TL4519	A-1
Adjustment	
VR4501	B-1
VR4509	A-3
VR4550	A-2
Connector	
PK4501	A-1
PK4502	A-2
PK4503	A-3

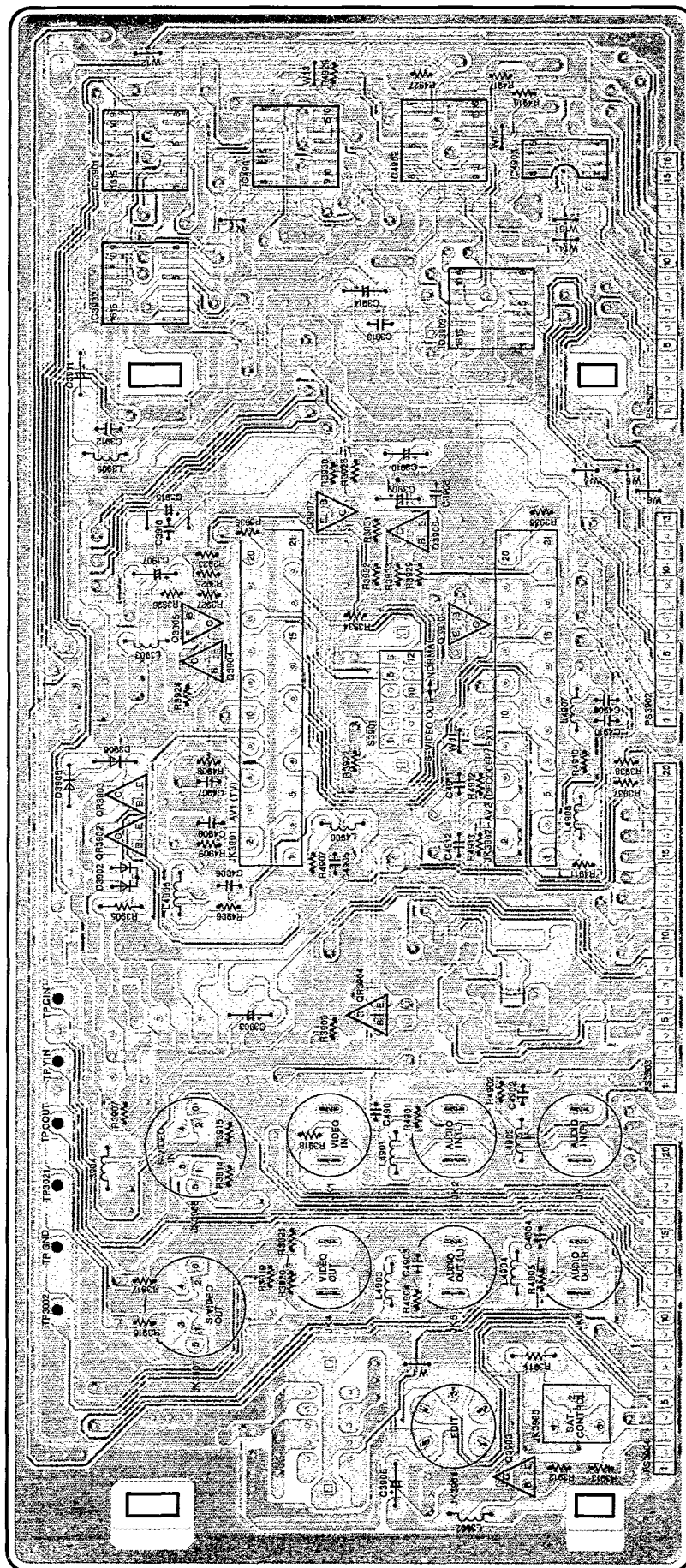
ADDRESS INFORMATION



3-31. INPUT/OUTPUT PACK C.B.A. (VEP03D77A)

INPUT/OUTPUT PACK C.B.A.					
Transistor		Integrated Circuit		TPCOUT	
Q3903	B-1	IC3901	C-7	TPGND	C-2
Q3904	C-5	IC3902	C-6	TPYIN	C-3
Q3905	C-5	IC3903	B-6	Connector	
Q3906	B-5	IC4901	C-7		
Q3907	B-5	IC4902	B-7		
Q3910	B-5	IC4903	A-7		
Transistor & Resistor		Test Point		Connector	
QF3902	C-4	TP3002	C-2		
QF3903	C-4	TP3021	C-2		
QF3904	B-3	TPCIN	C-3		
				PS3901	A-6
				PS3902	A-5
				PS3903	A-3
				PS3904	A-1

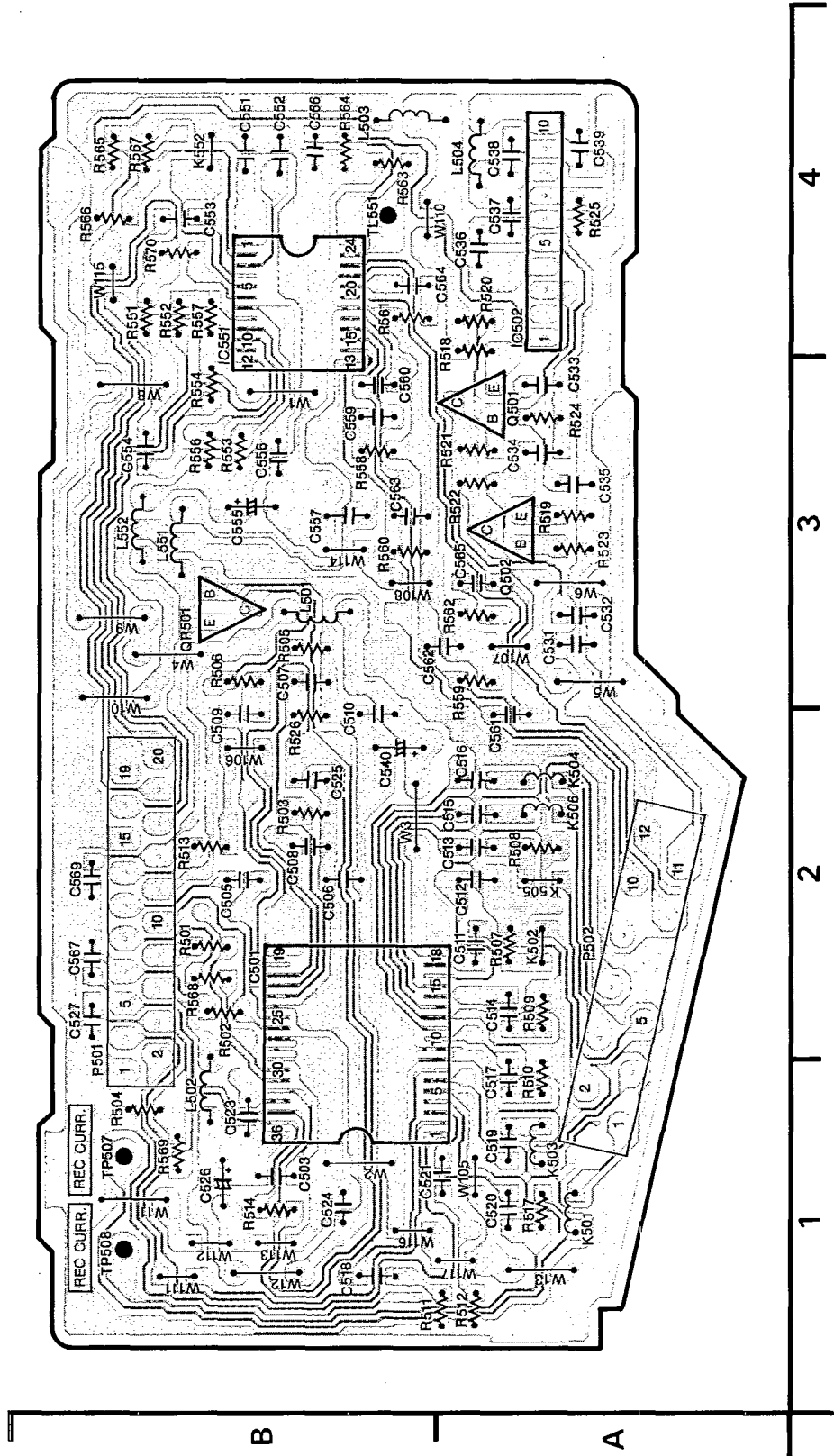
ADDRESS INFORMATION



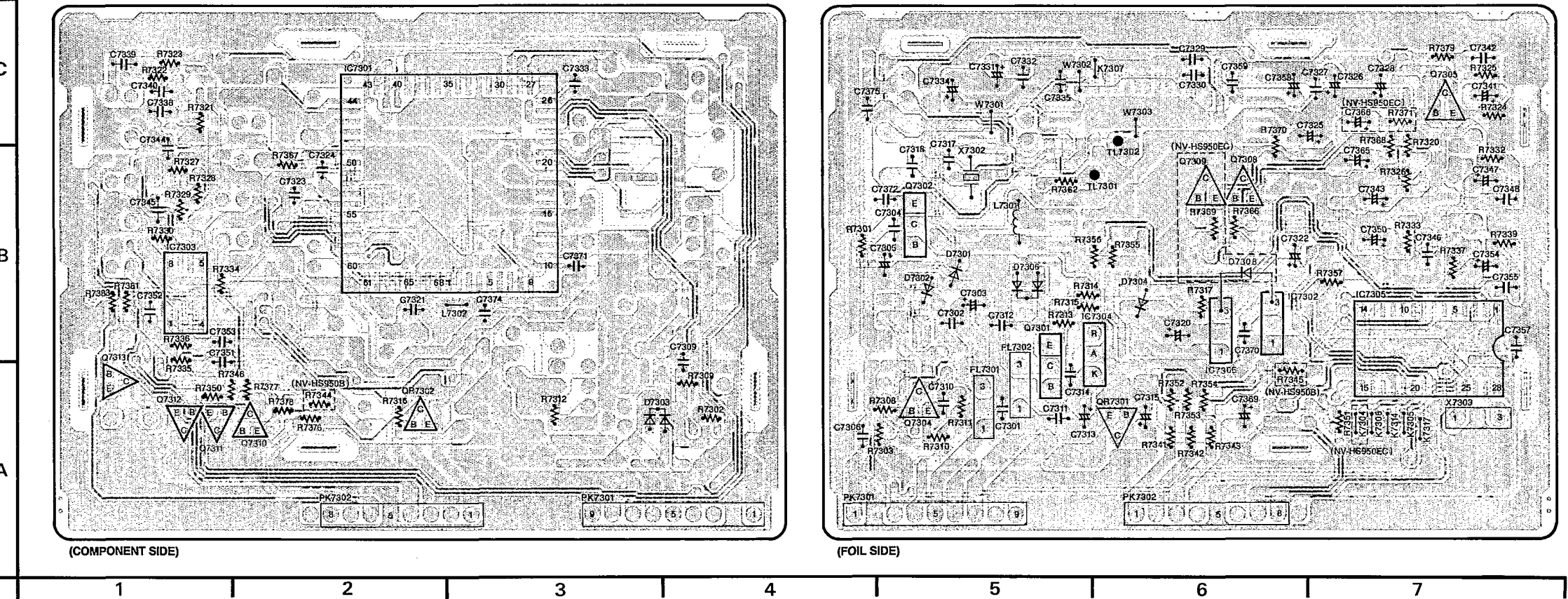
3-32. HEAD AMP C.B.A. (VEP05176M)

HEAD AMP C.B.A.	
Transistor	
Q501	A-3
Q502	A-3
Transistor & Resistor	
QR501	B-3
Integrated Circuit	
IC501	B-1
IC502	A-4
IC551	B-4
Test Point	
TL551	B-4
TP507	B-1
TP508	B-1
Connector	
P501	B-2
P502	A-1

ADDRESS INFORMATION



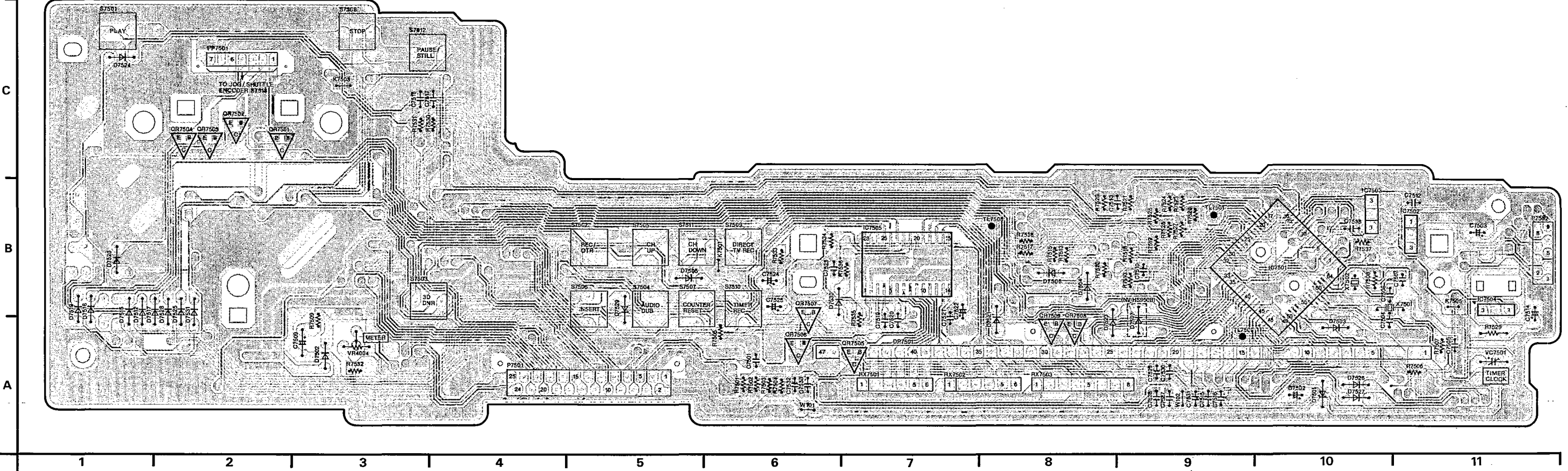
3-33. NICAM DECODER PACK C.B.A. (VEP07787Q: NV-HS950B) (VEP07787P: NV-HS950EC)



NICAM DECODER PACK C.B.A.		TIMER C.B.A.	
Transistor		Transistor & Resistor	
Q7301	B-5	QR7501	C-2
Q7302	B-5	QR7502	C-2
Q7304	A-5	QR7503	C-2
Q7305	C-7	QR7504	C-2
Q7308	B-6	QR7505	A-7
Q7309	B-6	QR7506	A-6
Q7310	A-2	QR7507	B-6
Q7311	A-1	QR7508	A-8
Q7312	A-1	QR7509	A-8
Q7313	A-1		
Transistor & Resistor		Integrated Circuit	
QR7301	A-6	IC7501	B-10
QR7302	A-2	IC7502	B-11
Integrated Circuit		IC7503	B-10
IC7301	C-2	IC7504	B-11
IC7302	B-6	IC7505	B-7
IC7303	B-1		
IC7304	B-6	Test Point	
IC7305	B-7	TL7501	B-9
IC7306	B-6	TL7508	B-8
Test Point		TL7509	A-9
TL7301	B-6	Adjustment	
TL7302	C-6	VC7501	A-11
Connector		VR4004	A-3
PK7301	A-3	Connector	
PK7301	A-5	P7501	A-4
PK7302	A-2	P7502	B-11
PK7302	A-6	PP7501	C-2

ADDRESS INFORMATION

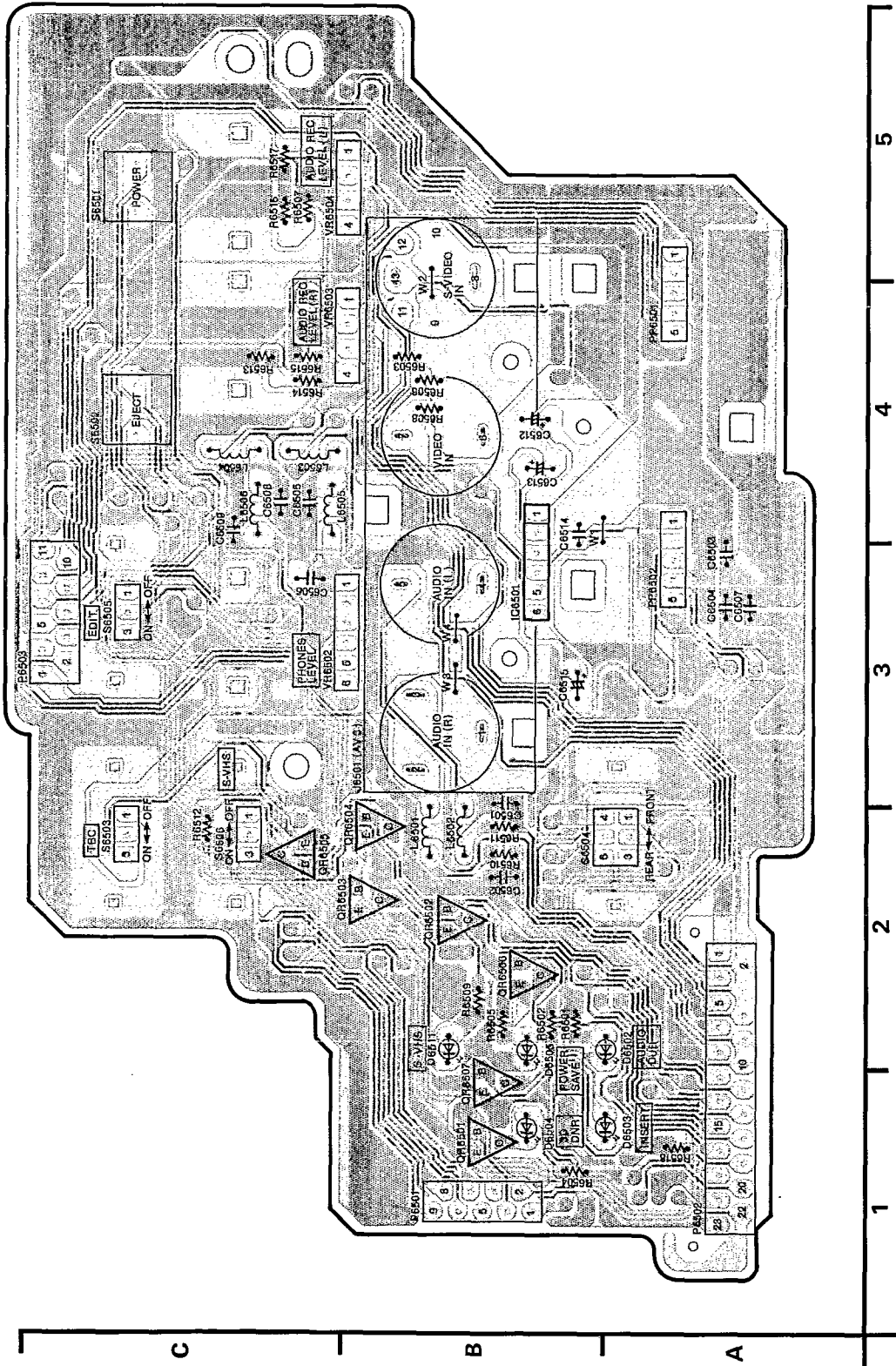
3-34. TIMER C.B.A. (VEP07951B: NV-HS950B) (VEP07951A: NV-HS950EC)



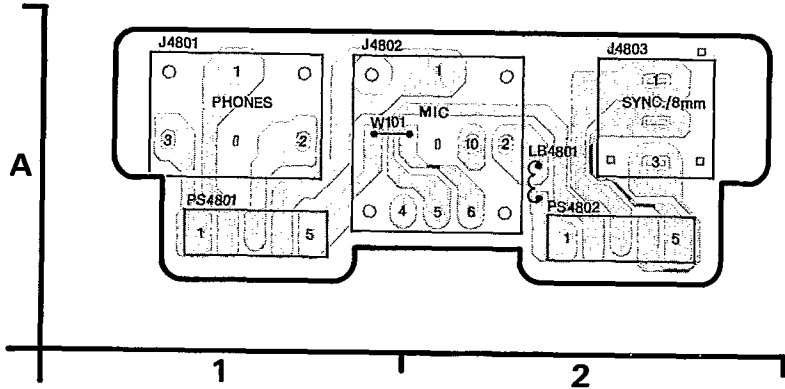
3-35. VR C.B.A. (VEP06B84A)

VR C.B.A.	
Transistor & Resistor	
QR6501	B-1
QR6502	B-2
QR6503	B-2
QR6504	B-2
QR6505	C-2
QR6506	B-2
QR6507	B-1
Integrated Circuit	
IC6501	B-3
Adjustment	
VR6502	B-3
VR6503	B-4
VR6504	B-5
Connector	
P6501	B-1
P6502	A-1
P6503	C-3
PP6501	A-4
PP6502	A-3

ADDRESS INFORMATION



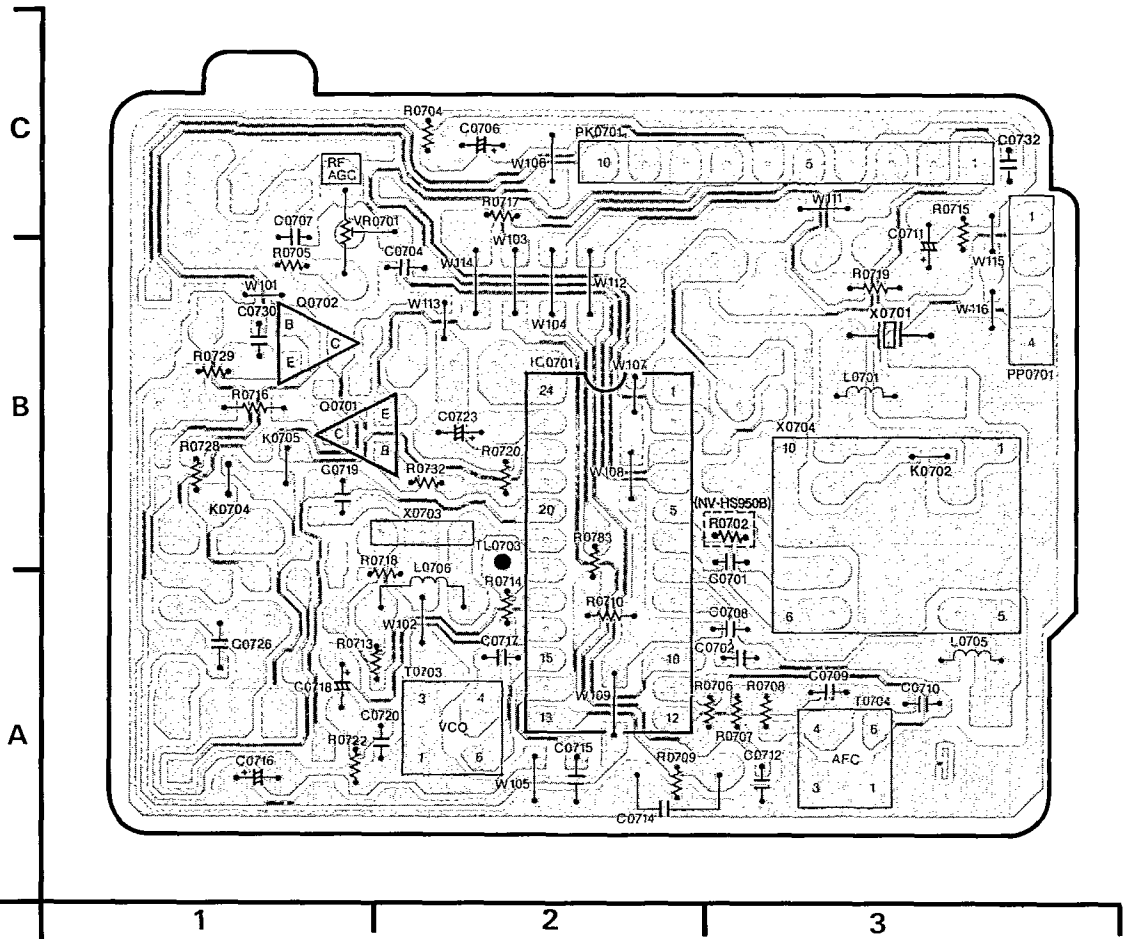
3-36. FRONT JACK C.B.A. (VEP04531A)



FRONT JACK C.B.A.	
Connector	
PS4801	A-1
PS4802	A-2

ADDRESS INFORMATION

3-37. TV DEMODULATOR PACK C.B.A.
(VEP07801AD: NV-HS950B) (VEP07801AC: NV-HS950EC)

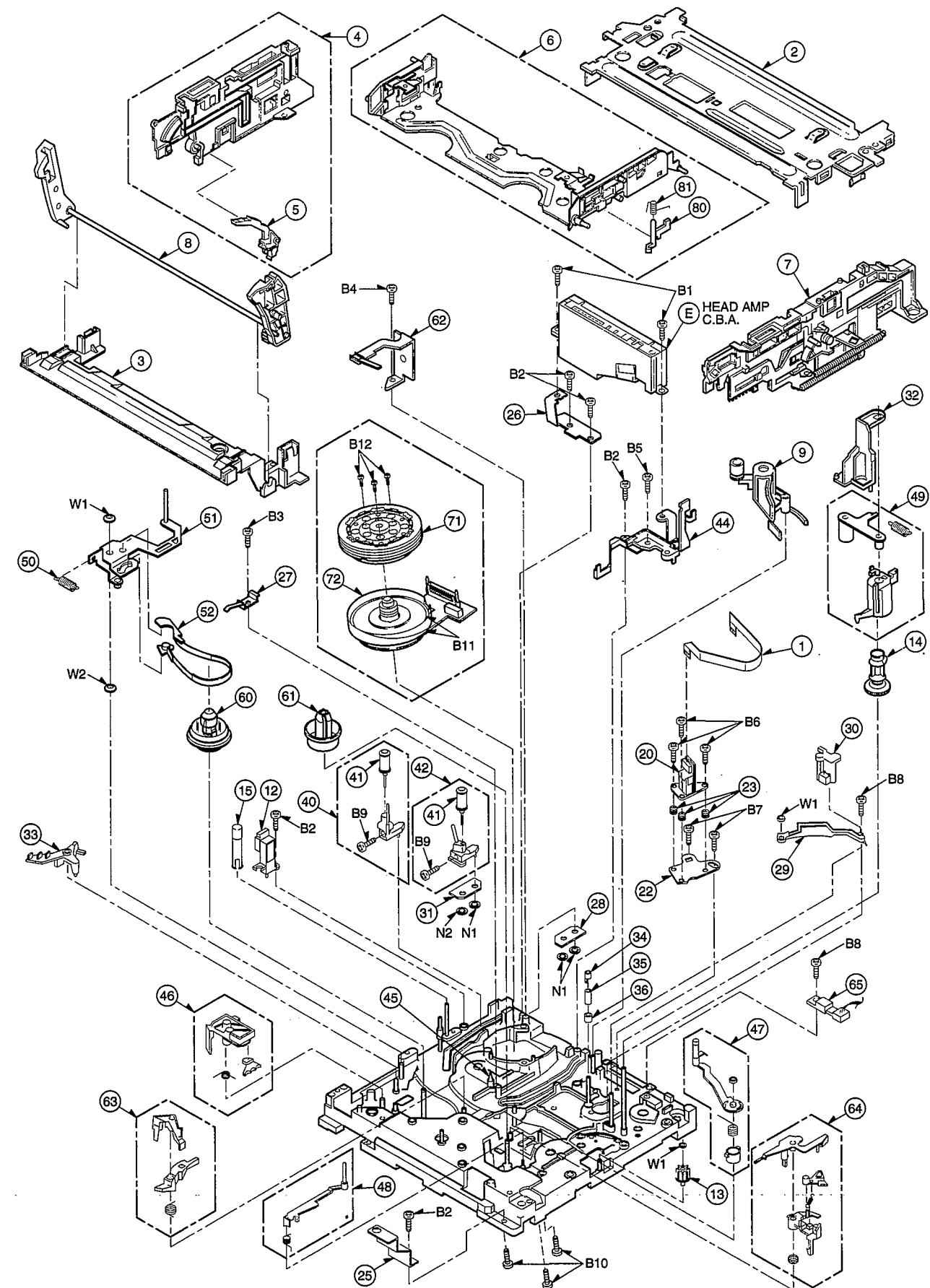


TV DEMODULATOR PACK C.B.A.	
Transistor	
Q0701	B-1
Q0702	B-1
Integrated Circuit	
IC0701	B-2
Test Point	
TL0703	B-2
Adjustment	
T0703	A-2
T0704	A-3
VR0701	C-1
Connector	
PK0701	C-2
PP0701	C-3

ADDRESS INFORMATION

SECTION 4
EXPLODED VIEWS & PARTS LIST

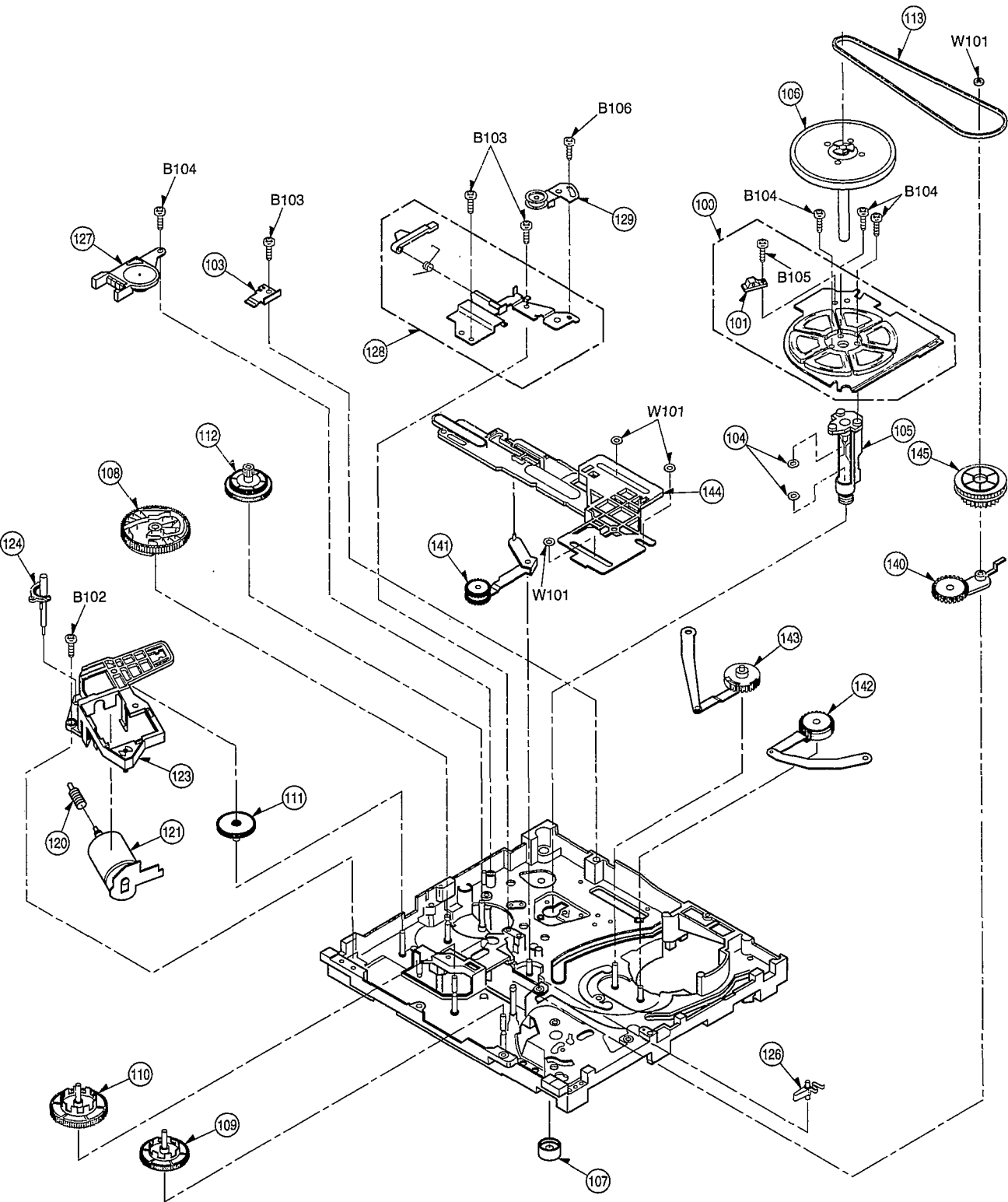
4-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST
① CHASSIS PARTS SECTION (1)



Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <1> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1 (1)	VMJ0743	FLEXIBLE CABLE (6P)	1	P4002-A/C HEAD
2 (1)	VMA8644	TOP PLATE	1	
3 (1)	VMA8787	CASSETTE GUIDE	1	
4 (1)	VXA4660	SIDE PLATE (L) UNIT	1	
5 (1)	VXL2250	OPENER LEVER UNIT	1	
6 (1)	VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7 (1)	VXA4806	SIDE PLATE (R) UNIT	1	
8 (1)	VXP1339	MAIN SHAFT UNIT	1	
9 (1)	VXL2440	CLEANER ARM UNIT	1	
12 (1)	VBS0052	FE HEAD	1	
13 (1)	VDG0871	CARRIAGE CONNECTION GEAR	1	
14 (1)	VDG0886	PINCH CAM GEAR	1	
15 (1)	VXP1402	IMPEDANCE ROLLER UNIT	1	
20 (1)	VED0217	A/C HEAD (1) UNIT	1	
22 (1)	VMA8624	A/C HEAD BASE	1	
23 (1)	VMB2515	A/C HEAD SPRING	3	
25 (1)	VMA8761	MOUNT ANGLE	1	
26 (1)	VMA9158	HEAD AMP MOUNT ANGLE (L)	1	
27 (1)	VMG0917	EARTH SPRING	1	
28 (1)	VMA8874	INCLIND BASE HOLDER (S)	1	
29 (1)	VMD2078	P5 STOPPER BASE	1	
30 (1)	VXA4927	P5 POST STOPPER	1	
31 (1)	VMA8873	INCLIND BASE HOLDER (T)	1	
32 (1)	VMD2101	OPENER PIECE	1	
33 (1)	VML2776	TENSION SPRING ARM	1	
34 (1)	VMX1544	P4 UPPER LIMITER	1	
35 (1)	VMX2175	P4 SLEEVE	1	
36 (1)	VMX2176	P4 LOWER LIMITER	1	
40 (1)	VXA5245KIT	INCLINED BASE (S) UNIT	1	OR VXA4982KIT
41 (1)	VXP1826	ROLLER POST	2	
42 (1)	VXA5247KIT	INCLINED BASE (T) UNIT	1	OR VXA4984KIT
44 (1)	VXA4974	HEAD AMP MOUNT ANGLE (R) U.	1	
45 (1)	VMS5383	CASSETTE POSITION FIXTURE	1	
46 (1)	VXL2310	REVIEW ARM UNIT	1	
47 (1)	VXL2306	P5 ARM UNIT	1	
48 (1)	VXL2394	TAKE UP TENSION REG. ARM U.	1	
49 (1)	VXL2246	PINCH ARM UNIT	1	
50 (1)	VMB2434	TENSION SPRING	1	
51 (1)	VXL2309	TENSION ARM (1) UNIT	1	
52 (1)	VXZ0310	TENSION BAND UNIT	1	
60 (1)	VXR0221	SUPPLY REEL TABLE UNIT	1	
61 (1)	VXR0237	TAKE UP REEL TABLE UNIT	1	
62 (1)	VXS0248	EARTH PLATE	1	
63 (1)	VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64 (1)	VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70 (1)	VEG1404	CYLINDER UNIT	1	
71 (1)	VXP1747	UPPER CYLINDER UNIT	1	
72 (1)	VSC4474	CYLINDER SHIELD PLATE	1	
80 (1)	VML2680	RELEASE LEVER	1	
81 (1)	VMB2013	RELEASE SPRING	1	
B1 (1)	VHD0773	SCREW	2	
B2 (1)	XTV26+6F	SCREW	5	
B3 (1)	XTV26+4F	SCREW	1	
B4 (1)	XTN3+8FFZ	SCREW	1	
B5 (1)	XTV26+10F	SCREW	1	
B6 (1)	VHD0762	SCREW	3	
B7 (1)	XTV26+6FZ	SCREW	2	
B8 (1)	XTV26+8F	SCREW	2	
B9 (1)	XQN2+AJ4	SCREW	2	
B10 (1)	VHD0342	SCREW	3	
B11 (1)	XYNV0029	SCREW	2	
N1 (1)	VHN0192	NUT	3	
N2 (1)	VHN0193	NUT	1	
W1 (1)	VMX2208	WASHER	3	
W2 (1)	XWGV26D5G	WASHER	1	

2 CHASSIS PARTS SECTION (2)



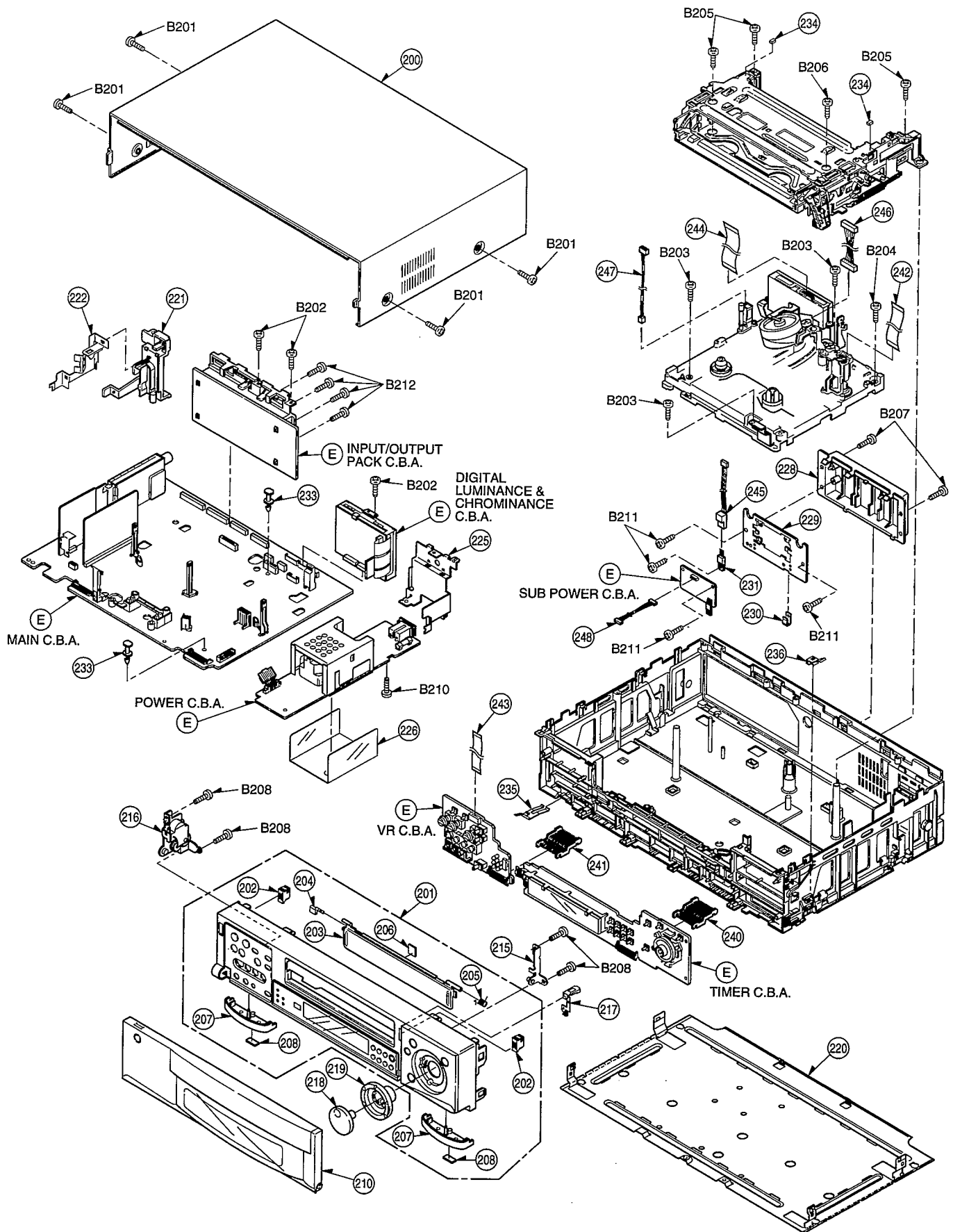
Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark < ! > have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
100 (2)	VEK5927	CAPSTAN STATOR UNIT	1	
101 (2)	VBK0061	FG HEAD	1	
103 (2)	VMA8930	ROTOR STOPPER	1	
104 (2)	VMX1927	OIL SEAL	2	
105 (2)	VXD0140	HOUSING UNIT	1	
106 (2)	VXP1519	CAPSTAN ROTOR UNIT	1	
107 (2)	VXQ0297	THRUST SCREW UNIT	1	
108 (2)	VDG0913	MAIN CAM GEAR	1	
109 (2)	VDG0956	SUPPLY REEL GEAR	1	
110 (2)	VDG0957	TAKE UP REEL GEAR	1	
111 (2)	VDG0868	WORM WHEEL GEAR	1	
112 (2)	VDG0885	SUB CAM GEAR	1	
113 (2)	VDV0235	TIMING BELT	1	
120 (2)	VDG0866	WORM GEAR	1	
121 (2)	VEM0427	LOADING MOTOR (1) UNIT	1	
123 (2)	VMD1942	MOTOR BRACKET	1	
124 (2)	VMD2552	S-VHS SW ACTUATOR	1	
126 (2)	VML2725	IDLER CONTROL LEVER	1	
127 (2)	VSS0365	MODE SW	1	
128 (2)	VXA5138	SS BRAKE BASE UNIT	1	
129 (2)	VXA4799	TENSION ROLLER UNIT	1	
140 (2)	VXL2378	IDLER ARM UNIT	1	
141 (2)	VXL2372	DIRECT LEVER UNIT	1	
142 (2)	VXL2299	SUPPLY LOADING ARM UNIT	1	
143 (2)	VXL2300	TAKE UP LOADING ARM UNIT	1	
144 (2)	VXL2307	MAIN LEVER UNIT	1	
145 (2)	VXP1409	GENTRE CLUTCH	1	
B102 (2)	XTV26+8F	SCREW	1	
B103 (2)	XTV26+6F	SCREW	3	
B104 (2)	VHD0753	SCREW	4	
B105 (2)	VHD0754	SCREW	1	
B106 (2)	XSB26+4FZ	SCREW	1	
W101 (2)	VMX2208	WASHER	4	

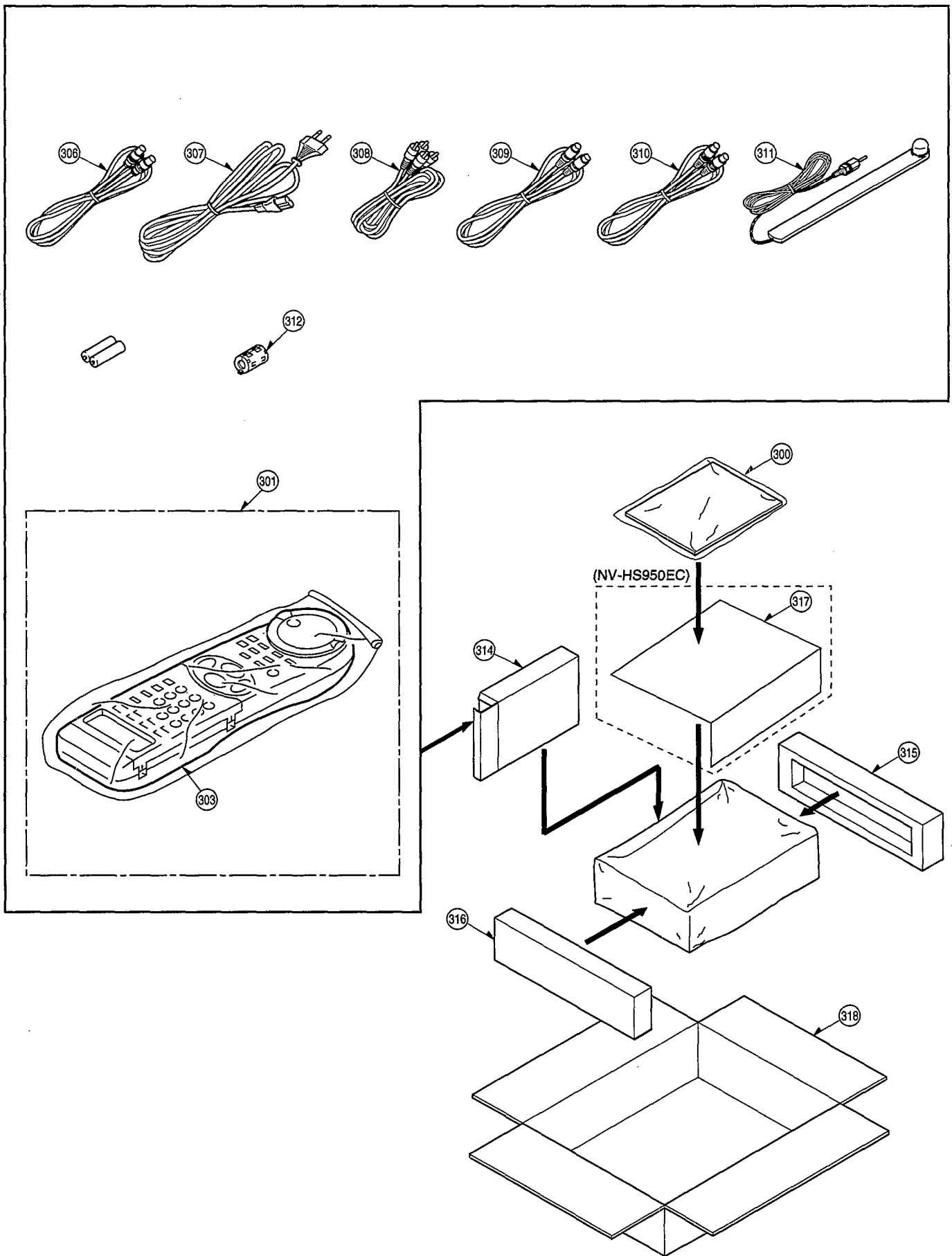
Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark < ! > have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
200 (3)	VGM1150	TOP PANEL	1	
201 (3)	VYP6479	FRONT PANEL (1) UNIT	1	
202 (3)	VGQ2216	DOOR MAGNET	2	
203 (3)	VKF2715	BLINDER PANEL	1	
204 (3)	VDK0148	BLINDER CAM	1	
205 (3)	VMB2521	BLINDER SPRING	1	
206 (3)	VMT0502	BLINDER CUSHION	1	
207 (3)	VKA0305	LEG	2	
208 (3)	VKA0122	FOOT	2	
210 (3)	VYF2386	DOOR PANEL UNIT	1	NV-HS950B
210 (3)	VYF2385	DOOR PANEL UNIT	1	NV-HS950EC
215 (3)	VXA5429	DOOR ANGLE (R) UNIT	1	
216 (3)	VXA5879	DOOR ANGLE (L) UNIT	1	
217 (3)	VMC1226	FRONT EARTH SPRING	1	
218 (3)	VGU7530	JOG DIAL	1	
219 (3)	VGU7531	SHUTTLE RING	1	
220 (3)	VKU0412	BOTTOM PLATE	1	
221 (3)	VJH0979	ANTENNA JACK PLATE	1	
222 (3)	VMC1213	ANTENNA EARTH SPRING	1	
225 (3)	VMP4717	AC PLATE	1	
226 (3)	VMZ2394	POWER BARRIER	1	
228 (3)	VKF2371	REAR COVER	1	
229 (3)	VSG4467	HEAT SINK	1	
230 (3)	VMC0357	TR. HOLDER SPRING	1	
231 (3)	2SB1370YD01E	POWER TRANSISTOR	1	
233 (3)	VMX2233	G. B. A. SPACER	2	
234 (3)	VMX2250	TOP SPACER	2	
235 (3)	VMG1062	JACK EARTH SPRING	1	
236 (3)	VMG1065	POWER EARTH SPRING	1	
240 (3)	VJP3673A025G	BRIDGE CONNECTOR (25P)	1	P3002-P7501
241 (3)	VJP3673A023G	BRIDGE CONNECTOR (23P)	1	P3003-P6502
242 (3)	VWJ0904B	FLAT CARD CABLE (15P)	1	P2501-CAPSTAN
243 (3)	VWJ1157	FLAT CARD CABLE (11P)	1	P3004-P6503
244 (3)	VWJ1171	FLAT CARD CABLE (20P)	1	P3001-P501
245 (3)	VEE8564	WIRE CABLE	1	P2502-POWER TR.
246 (3)	VEE0A24	WIRE CABLE	1	P2004-CYLINDER
247 (3)	VEE0A25	WIRE CABLE	1	P4002-FE HEAD
248 (3)	VEE0A26	WIRE CABLE	1	P3005-P1201
B201 (3)	XTW3+10TFZ	SCREW	4	
B204 (3)	VHD0773	SCREW	3	
B203 (3)	VHD0168	SCREW	3	
B204 (3)	VHD0874	SCREW	1	
B205 (3)	XTV26+8FR	SCREW	3	
B206 (3)	XTV26+10F	SCREW	1	
B207 (3)	XTV3+12JFZ	SCREW	2	
B208 (3)	XTN26+5GFZ	SCREW	4	
B210 (3)	VHD0418	SCREW	1	
B211 (3)	XTV3+8J	SCREW	4	
B212 (3)	XTV3+8GFZ	SCREW	4	

3 CASING PARTS SECTION



4 PACKING PARTS SECTION



Note: 1. * Be sure to make your orders of replacement parts according to this list.

2. IMPORTANT SAFETY NOTICE

Components identified with the mark < I > have the special characteristics for safety. When replacing any of these components, use only the same type.

[illegible][illegible]

4-2. ELECTRICAL REPLACEMENT PARTS LIST

- Note: 1. Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE: Components identified with the mark <■> have the special characteristics for safety. When replacing any of these components, use only the same type.
 3. Unless otherwise specified, All resistors are in OHMS, K-1,000 OHMS. All capacitors are in MICROFARADS (uF), P-uuf.
 4. The P.C. Board units marked with "■" show below the main assembled parts.
 5. The marking (RTL) indicates the retention time is limited for this item.
 After the discontinuation of this assembly in production, it will no longer be available.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP06B83B	MAIN C.B.A. (Page:4-8)	1	(RTL) NV-HS950B INCLUDING THE HI-FI AUDIO PACK C.B.A. (VEP04664C). NICAM DECODER C.B.A. (VEP07787Q). TV DEMODULATOR PACK C.B.A. (VEP07801AD).
■	VEP04664C	HI-FI AUDIO PACK C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN MAIN C.B.A. (VEP06B83B).
■	VEP07787Q	NICAM DECODER C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN MAIN C.B.A. (VEP06B83B).
■	VEP07801AD	TV DEMODULATOR PACK C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN MAIN C.B.A. (VEP06B83B).
■	VEP06B83C	MAIN C.B.A. (Page:4-14)	1	(RTL) NV-HS950EC INCLUDING THE HI-FI AUDIO PACK C.B.A. (VEP04664C). NICAM DECODER C.B.A. (VEP07787P). TV DEMODULATOR PACK C.B.A. (VEP07801AC).
■	VEP04664C	HI-FI AUDIO PACK C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN MAIN C.B.A. (VEP06B83C).
■	VEP07787P	NICAM DECODER PACK C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN MAIN C.B.A. (VEP06B83C).
■	VEP07801AC	TV DEMODULATOR PACK C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN MAIN C.B.A. (VEP06B83C).
■	VEP03D77A	INPUT/OUTPUT C.B.A. (Page:4-20)	1	(RTL)
■	VEP05176M	HEAD AMP C.B.A. (Page:4-21)	1	(RTL)
■	VEP07951B	TIMER C.B.A. (Page:4-22)	1	(RTL) NV-HS950B
■	VEP07951A	TIMER C.B.A. (Page:4-22)	1	(RTL) NV-HS950EC
■	VEP03D75B	DIGITAL C.B.A. (Page:4-23)	1	(RTL) NV-HS950B INCLUDING THE ANALOGUE C.B.A. (VEP03D76B).
■	VEP03D76B	ANALOGUE C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN DIGITAL C.B.A. (VEP03D75B). INCLUDING THE AFC C.B.A. (VEP03E17A).
■	VEP03E17A	AFC C.B.A.	1	(RTL)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
				C.B.A. IS INCLUDED IN ANALOGUE C.B.A. (VEP03D76B).
■	VEP03D75A	DIGITAL C.B.A. (Page:4-27)	1	(RTL) NV-HS950EC INCLUDING THE ANALOGUE C.B.A. (VEP03D76A).
■	VEP03D76A	ANALOGUE C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN DIGITAL C.B.A. (VEP03D75A). INCLUDING THE AFC C.B.A. (VEP03E17A).
■	VEP03E17A	AFC C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN ANALOGUE C.B.A. (VEP03D76A).
■	VEP06B84A	VR C.B.A. (Page:4-30)	1	(RTL) INCLUDING THE FRONT JACK C.B.A. (VEP04531A).
■	VEP04531A	FRONT JACK C.B.A.	1	(RTL) C.B.A. IS INCLUDED IN VR C.B.A. (VEP06B84A).
■	VEP01804A	SUB POWER C.B.A. (Page:4-31)	1	(RTL)
△	■	VEP01639A	POWER C.B.A. (Page:4-31)	1 (RTL)
■	———	RT CONNECTION C.B.A. (Page:4-32)	1	C.B.A. IS INCLUDED IN CYLINDER UNIT (VEG1404).
■	———	STATOR CONNECTION C.B.A. (Page:4-32)	1	C.B.A. IS INCLUDED IN CYLINDER UNIT (VEG1404).
■	———	MOTOR C.B.A. (Page:4-32)	1	C.B.A. IS INCLUDED IN LOADING MOTOR (1) UNIT (VEM0427).
△	TU7601	ENG47258G1	TUNER	1 NV-HS950B
△	TU7601	ENG47259G1	TUNER	1 NV-HS950EC
△	F1101	XBA2C16TH15	FUSE	1
■	VEP06B83B	MAIN C.B.A.		(RTL) NV-HS950B
G0701, 02	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
G0704	ECUX1H331JGV	C. CAPACITOR CH 50V 330P	1	
G0706	ECEA1HKAOR1	E. CAPACITOR 50V 0.1U	1	
G0707, 08	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
G0709	ECUX1H120JGV	C. CAPACITOR CH 50V 12P	1	
G0710	ECUX1H470JPV	C. CAPACITOR CH 50V 47P	1	
G0711	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
G0712	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
G0714	ECQB1H473JF	P. CAPACITOR 50V 0.047U	1	
G0715	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
G0716	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
G0717	ECUX1H270JPV	C. CAPACITOR CH 50V 27P	1	
G0718	ECEA1HKSRA7	E. CAPACITOR 50V 0.47U	1	
G0719	ECUX1H220JGV	C. CAPACITOR CH 50V 22P	1	
G0720	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
G0723	ECEA1HKAOR1	E. CAPACITOR 50V 0.1U	1	
G0726	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
G0730	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
G0732	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1001	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1002	ECEA1CU470	E. CAPACITOR 16V 47U	1	
C1003	ECEA1CKS101	E. CAPACITOR 16V 100U	1	
C1004	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1005	ECEA1AKA220	E. CAPACITOR 10V 22U	1	
C1006	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C1007	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1008	ECEA1AKA220	E. CAPACITOR 10V 22U	1	
C1009	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C1013	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C1014	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1016	ECEA1AKA220	E. CAPACITOR 10V 22U	1	
C1019	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1020	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C2030	ECUM1H473ZFN	C. CAPACITOR CH 50V 0.047U	1	
C2032-34	ECEA1VKN2R2	E. CAPACITOR 35V 2.2U	3	
C2035	ECUM1E683KBN	C. CAPACITOR CH 25V 0.068U	1	
C2036-38	ECUM1E104KBN	C. CAPACITOR CH 50V 0.1U	3	
C2040	ECUM1C274KBN	C. CAPACITOR CH 16V 0.27U	1	
C2041	ECEA1HKAR47	E. CAPACITOR 50V 0.47U	1	
C2042	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C2047	ECEA1AKS221	E. CAPACITOR 10V 220U	1	
C2048	ECUM1H472KBN	C. CAPACITOR CH 50V 4700P	1	
C2049	ECQV1H683B46	P. CAPACITOR 50V 0.068U	1	
C2050, 51	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C2052, 53	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	2	
C2054, 55	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C2056	ECEA1EKS4R7	E. CAPACITOR 25V 4.7U	1	
C2057, 58	ECEA1ESN3R3	E. CAPACITOR 25V 3.3U	2	
C2059	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C2060	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C2061	ECEA1AKS221	E. CAPACITOR 10V 220U	1	
C2062	ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C2063	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2064	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2065	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2066	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2067	ECUM1H223KBN	C. CAPACITOR CH 50V 0.022U	1	
C2068	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2069	ECUM1H392KBN	C. CAPACITOR CH 50V 3900P	1	
C2070	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C2071	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2501	ECEA1HKS2R2	E. CAPACITOR 50V 2.2U	1	
C2502	ECA1CM221	E. CAPACITOR 16V 220U	1	
C2504, 05	ECUM1C474ZFN	C. CAPACITOR CH 16V 0.47U	2	
C2506, 07	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	2	
C2508-10	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	3	
C2511	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C2512	ECEA1HKS2R2	E. CAPACITOR 50V 2.2U	1	
C2513	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	1	
C2514	ECA1EM470	E. CAPACITOR 25V 47U	1	
C2515	ECEA1HKNR22	E. CAPACITOR 50V 0.22U	1	
C2516	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C2518, 19	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	2	
C2520	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2521	ECEA0JW221	E. CAPACITOR 6.3V 220U	1	
C2524	ECQV1H683B46	P. CAPACITOR 50V 0.068U	1	
C2525, 26	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C3001	ECEA1CKS470	E. CAPACITOR 16V 47U	1	
C3002, 03	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C3004	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C3005-07	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	3	
C3008-11	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	4	
C3012	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C3013	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3014	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C3015	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3016-19	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	4	
C3020	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4001	ECEA1AKA220	E. CAPACITOR 10V 22U	1	
C4002	ECQB1H223JF	P. CAPACITOR 50V 0.022U	1	
C4003	ECKD2H471KB5	C. CAPACITOR 500V 470P	1	
C4004, 05	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C4006, 07	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C4008	ECEA1AKA101	E. CAPACITOR 10V 100U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4009	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C4010	ECUM1H682KBN	C. CAPACITOR CH 50V 6800P	1	
C4011	ECQV1H104B46	P. CAPACITOR 50V 0.1U	1	
C4012	ECUM1H222JCN	C. CAPACITOR CH 50V 2200P	1	
C4013, 14	ECUM1H223KBN	C. CAPACITOR CH 50V 0.022U	2	
C4016	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C4017	ECUM1H682KBN	C. CAPACITOR CH 50V 6800P	1	
C4018	ECEA1HKS0R1	E. CAPACITOR 50V 0.1U	1	
C4019, 20	ECEA1HKA0R1	E. CAPACITOR 50V 0.1U	2	
C4021	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4022	ECUM1H682KBN	C. CAPACITOR CH 50V 6800P	1	
C4023	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C4024	ECUM1H272KBN	C. CAPACITOR CH 50V 2700P	1	
C4025, 26	ECEA1CKA220	E. CAPACITOR 16V 22U	2	
C4027	ECEA1HKS3R3	E. CAPACITOR 50V 3.3U	1	
C4028	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C4029, 30	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	2	
C4031	ECEA1CKS101	E. CAPACITOR 16V 100U	1	
C4032	ECUM1H822KBN	C. CAPACITOR CH 50V 8200P	1	
C4033, 34	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	2	
C4035	ECUM1H562KBN	C. CAPACITOR CH 50V 5600P	1	
C4036	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4037	ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C4038	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4039	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C4040	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	1	
C4042	ECUM1H222JCN	C. CAPACITOR CH 50V 2200P	1	
C4043	ECEA0JKA331	E. CAPACITOR 6.3V 330U	1	
C4044	ECEA1HKA4R7	E. CAPACITOR 50V 4.7U	1	
C4045	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4046	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4047	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4048, 49	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C4050	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4501	ECUX1H681JCV	C. CAPACITOR CH 50V 680P	1	
C4502	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C4503	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C4506	ECA1CAK100X	E. CAPACITOR 16V 10U	1	
C4507	ECQB1H223JF	P. CAPACITOR 50V 0.022U	1	
C4508	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C4509	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C4510	ECQB1H103JF	P. CAPACITOR 50V 0.01U	1	
C4511	ECQB1H332JF	P. CAPACITOR 50V 3300P	1	
C4512	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C4513	ECUM1H681JCN	C. CAPACITOR CH 50V 680P	1	
C4514	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C4515	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C4521	ECUM1H473KBN	C. CAPACITOR CH 50V 0.047U	1	
C4522	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C4530	ECEA0JKA470X	E. CAPACITOR 6.3V 47U	1	
C4533	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C4537	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	1	
C4538	ECA1HAKR47X	E. CAPACITOR 50V 0.47U	1	
C4541	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4551	ECQB1H223JF	P. CAPACITOR 50V 0.022U	1	
C4556	ECA1CAK100X	E. CAPACITOR 16V 10U	1	
C4558	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C4559	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C4560	ECQB1H103JF	P. CAPACITOR 50V 0.01U	1	
C4561	ECQB1H332JF	P. CAPACITOR 50V 3300P	1	
C4562	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C4565	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C4569	ECUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C4572	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C4576	ECUM1H473KBN	C. CAPACITOR CH 50V 0.047U	1	
C4585, 86	ECEA0JKA101X	E. CAPACITOR 6.3V 100U	2	
C4587	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4591	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4592	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C4671, 72	ECA1CAK100X	E. CAPACITOR 16V 10U	2	
C4673	ECUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C4674	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4676	ECA1VAK470X	E. CAPACITOR 35V 47U	1	
C4677	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C6001, 02	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6004	ECA1EM470	E. CAPACITOR 25V 47U	1		C7320	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C6005	ECUM1C224ZFN	C. CAPACITOR CH 16V 0.22U	1		C7321	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6006-10	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	5		C7322	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1	
C6011	ECEA1HKS2R2	E. CAPACITOR 50V 2.2U	1		C7323, 24	EGUX1H391JCV	C. CAPACITOR CH 50V 390P	2	
C6012	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7325, 26	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C6013	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C7327	EGUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C6014, 15	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	2		C7328	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C6016, 17	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2		C7329, 30	EGUX1H471JCV	C. CAPACITOR CH 50V 470P	2	
C6018	EGUX1H561JCN	C. CAPACITOR CH 50V 560P	1		C7331	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6019-22	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	4		C7332, 33	EGUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	2	
C6023	ECEA1CKS100	E. CAPACITOR 16V 10U	1		C7334	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C6024	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		C7335	EGUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C6025	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1		C7338	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C6026	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		C7339	ECUM1H182KBM	C. CAPACITOR CH 50V 1800P	1	
C6027, 28	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		C7340	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C6701	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C7341	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6702, 03	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		C7342	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C6704	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1		C7343	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C6705, 06	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		C7344	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C6707	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		C7345	ECUM1H182KBM	C. CAPACITOR CH 50V 1800P	1	
C6708	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7346	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C6709	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		C7347	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6710	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C7348	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C6711	ECEA0JKA331	E. CAPACITOR 6.3V 330U	1		C7350	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C6712	ECEA1HKA010	E. CAPACITOR 50V 1U	1		C7351	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C6713	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1		C7352	ECUM1H182KBM	C. CAPACITOR CH 50V 1800P	1	
C6714	ECEA1HKA010	E. CAPACITOR 50V 1U	1		C7353	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C6715	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1		C7354	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6716	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C7355	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C6717	ECEA1CKA100	E. CAPACITOR 16V 10U	1		C7357	EGUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C6718	ECEA0JKA331	E. CAPACITOR 6.3V 330U	1		C7358	ECEA1HKA3R3	E. CAPACITOR 50V 3.3U	1	
C6719, 20	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		C7359	EGUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C6721	ECEA1CKA100	E. CAPACITOR 16V 10U	1		C7365	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C6722	ECEA0JKA331	E. CAPACITOR 6.3V 330U	1		C7369	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C6723	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7370	EGUX1C104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C6724	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		C7371, 72	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C6725	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1		C7374, 75	EGUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C6726	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	1		C7601	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6727	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1		C7604	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C6728, 29	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2		C7605	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6730	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1		C7606	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C6731	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7607	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6732	ECEA1HKA010	E. CAPACITOR 50V 1U	1		C7608, 09	ECEA0JKA101	E. CAPACITOR 6.3V 100U	2	
C6735, 36	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		C7610	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6737	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	1		C7611	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6738	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1		C7614	ECEA1HKA100	E. CAPACITOR 50V 10U	1	
C6739, 40	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		C7615	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C6741, 42	ECEA1HKA010	E. CAPACITOR 50V 1U	2		C7617	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C6743	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1		C7618	ECCF1H090D	C. CAPACITOR 50V 9P	1	
C6745	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1						
C6748	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1		D1001	MA4110H	DIODE	1	
C6749	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		D1002, 03	1SS254	DIODE	2	
C6750	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		D1004	MA4051-M	DIODE	1	
C6752, 53	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2		D1005	1SS254	DIODE	1	
C6754	ECEA1HKS2R2	E. CAPACITOR 50V 2.2U	1		D1006	MA4051-M	DIODE	1	
C6755	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1		D1007	1SS254	DIODE	1	
C6756, 57	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		D1009, 10	1SS254	DIODE	2	
C6758	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		D2005-08	1SS355	DIODE	4	
C6759	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1		D2009-13	1SS254	DIODE	5	
C6760	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1		D2501	11ES1	DIODE	1	
C6761	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1		D2502	MA157	DIODE	1	
C6763	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1		D2503, 04	1SS254	DIODE	2	
C6764, 65	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		D3002	MA151WK	DIODE	1	
C6766	ECEA1HKA010	E. CAPACITOR 50V 1U	1		D3005, 06	1SS254	DIODE	2	
C6770	ECUM1H391JCN	C. CAPACITOR CH 50V 390P	1		D3012-14	1SS254	DIODE	3	
C7301, 02	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	2		D4001	MA4056-M	DIODE	1	
C7303	ECEA1CKA470	E. CAPACITOR 16V 47U	1		D4002-04	1SS254	DIODE	3	
C7304	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		D4005	MA4075	DIODE	1	
C7305	ECEA1CKA220	E. CAPACITOR 16V 22U	1		D4006, 07	1SS254	DIODE	2	
C7306	EGUX1H391JCV	C. CAPACITOR CH 50V 390P	1		D4013	1SS254	DIODE	1	
C7309-12	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	4		D4504	1SS254	DIODE	1	
C7313	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1		D6001	LNS9LT. VT	LED	1	
C7314	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		D6002	MA4075-L	DIODE	1	
C7315	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1		D6003	1SS254	DIODE	1	
C7317, 18	EGUX1H040GCV	C. CAPACITOR CH 50V 4P	2		D6701, 02	1SS254	DIODE	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D6704	MA723-VT	DIODE	1		L7301	ELEXH100JBV	INDUCTOR 10UH	1	
D6705, 06	1SS254	DIODE	2		L7302	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
D7301	MA3082-L	DIODE	1		L7603, 04	VLQ0599J680	COIL 68UH	2	
D7302	MA751K	DIODE	1		L7606	VLQ0599J3R9	COIL 3.9UH	1	
D7303	MA151WK	DIODE	1		L7607	VLQ0599J680	COIL 68UH	1	
D7304	MA717	DIODE	1		L7608	ERJ8GEYOR00	M. RESISTOR CH 1/8W 0	1	
D7306	MA151WK	DIODE	1						
D7601	MA4300-M	DIODE	1		LB3001	VLP0085	COIL	1	
D7602	1SS254	DIODE	1		LB4001	VLP0083	COIL	1	
D7604	1SS254	DIODE	1		LB6001	VLP0074	COIL	1	
					LB6002-08	VLP0145	COIL	7	
FL7301, 02	VLF0633	FILTER	2		LB6701, 02	VLP0145	COIL	2	
					LB6703-06	VLP0083	COIL	4	
IC0701	LA7576	IC	1		LB6709-14	VLP0145	COIL	6	
IC1002	HA17431PA	IC	1		LB7601	VLP0099	COIL	1	
IC2002	AN3814K	IC	1		LB7602	VLP0083	COIL	1	
IC2501	BA6871BS	IC	1						
IC3002	MC14053BF	IC	1		P1001	VJS3631A011A	CONNECTOR (FEMALE) 11P	1	
IC4001	BA7795FS	IC	1		P2004	VJP1236T	CONNECTOR (MALE) 9P	1	
IC4002	MC14053BF	IC	1		P2501	VJS3537A015G	CONNECTOR (FEMALE) 15P	1	
IC4003	NJM4565DD	IC	1		P2502	VJP3483	CONNECTOR (MALE) 3P	1	
IC4004	NJM4558M	IC	1		P3001	VJS3537A020G	CONNECTOR (FEMALE) 20P	1	
IC4501	BH7778AK	IC	1		P3002	VJS3673B025G	CONNECTOR (FEMALE) 25P	1	
IC4502	BU4052BCF	IC	1		P3003	VJS3673B023G	CONNECTOR (FEMALE) 23P	1	
IC4503	BA7735FS	IC	1		P3004	VJS3537A011G	CONNECTOR (FEMALE) 11P	1	
IC4681	BA4558F	IC	1		P3005	VJP1231T	CONNECTOR (MALE) 4P	1	
IC6001	MN675536VR9W	IC	1		P4001	VJS3675A006G	CONNECTOR (FEMALE) 6P	1	
IC6002	BA6887-V3	IC	1		P4002	VJP1230T	CONNECTOR (MALE) 3P	1	
IC6003, 04	ON1387	PHOTO INTERRUPTER	2		P6001	VJS3821	CONNECTOR (FEMALE) 4P	1	
IC6701	BH7236AF	IC	1		P6002	VJS3640A002	CONNECTOR (FEMALE) 2P	1	
IC6702	ST24W16FB6	IC	1						
IC6703	S80743AL	IC	1		PK0701	VJR0816E010W	CONNECTOR (MALE) 10P	1	
IC6704	SAA5281ZPM3	IC	1		PK4501	VJR0777B008W	CONNECTOR (MALE) 8P	1	
IC6705	TC7W74F	IC	1		PK4502	VJR0777B013W	CONNECTOR (MALE) 13P	1	
IC6706	SABC513AL16P	IC	1		PK4503	VJR0777B010W	CONNECTOR (MALE) 10P	1	
IC6707	NJM2513M	IC	1		PK7301	VJR0777B009W	CONNECTOR (MALE) 9P	1	
IC6708	T74HC573AF	IC	1		PK7302	VJR0777B008W	CONNECTOR (MALE) 8P	1	
IC6709	AN3581S	IC	1						
IC6710	M27C1001FAAA	IC	1		PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
IC7301	MSP3410B-F7	IC	1		PP3001, 02	VJP3186A018W	CONNECTOR (MAIL) 18P	2	
IC7302	PST7043	IC	1		PP3003	VJP3042G007W	CONNECTOR (MALE) 7P	1	
IC7303	M5238FP	IC	1		PP4001	VJP3042G016W	CONNECTOR (MALE) 16P	1	
IC7304	HA17431PA	IC	1		PP4002	VJP3042G013W	CONNECTOR (MALE) 13P	1	
IC7305	MN155402VZDB	IC	1		PP4003, 04	VJP3042G020W	CONNECTOR (MAIL) 20P	2	
IC7306	PST7043	IC	1						
					Q0701	MSD601-S	TRANSISTOR	1	
K0702	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		Q0702	MSB709-R	TRANSISTOR	1	
K0704, 05	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2		Q1001	2SD25440PQA	TRANSISTOR	1	
K2001, 02	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2		Q1002, 03	2SD1996-S	TRANSISTOR	2	
K4665	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		Q1004	2SB1321A	TRANSISTOR	1	
K7305-07	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3		Q1005	2SD1991A	TRANSISTOR	1	
K7314	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		Q1006	2SD602A	TRANSISTOR	1	
K7317	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		Q1007	2SD601A	TRANSISTOR	1	
K7601	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1		Q1009	2SD1996-S	TRANSISTOR	1	
K7605	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1		Q1010, 11	MSD1328	TRANSISTOR	2	
					Q1015, 16	2SD1996-S	TRANSISTOR	2	
L0701	VLQ0163JR33	COIL 0.33UH	1		Q3001	2SD601A	TRANSISTOR	1	
L0705	VLQ0163J2R7	COIL 2.7UH	1		Q3002	2SB709A	TRANSISTOR	1	
L0706	VLQEL05S8R2K	COIL 8.2UH	1		Q3003	2SD601A	TRANSISTOR	1	
L2002	VLQ0599J101	COIL 100UH	1		Q3011	MSD602	TRANSISTOR	1	
L2501	ELESE102KA	COIL 1000UH	1		Q3012	MSB710	TRANSISTOR	1	
L3001	VLQ0599J680	COIL 68UH	1		Q3013	MSD602	TRANSISTOR	1	
L4001, 02	VLQ0599J680	COIL 68UH	2		Q3014	MSB710	TRANSISTOR	1	
L4003, 04	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2		Q3015	2SD601A	TRANSISTOR	1	
L4005, 06	VLQ0599J680	COIL 68UH	2		Q4001	2SB710A	TRANSISTOR	1	
L4007	VLQ0123	COIL	1		Q4002, 03	2SD601A	TRANSISTOR	2	
L6002-04	VLQ0599J680	COIL 68UH	3		Q4006	2SB710A	TRANSISTOR	1	
L6702	VLQ0599J680	COIL 68UH	1		Q4007-09	2SD601A	TRANSISTOR	3	
L6703	VLQ0599J3R3	COIL 3.3UH	1		Q4501	2SD1468	TRANSISTOR	1	
L6704	VLQ0599J330	COIL 33UH	1		Q4551	2SA1515	TRANSISTOR	1	
L6705	VLQ0599J270	COIL 27UH	1		Q6001	2SB709A	TRANSISTOR	1	
L6709	VLQ0599J680	COIL 68UH	1		Q6002, 03	PN205LT-NCVT	PHOTO TRANSISTOR	2	
L6710	VLQ0599J390	COIL 39UH	1		Q6701-05	2SD601A	TRANSISTOR	5	
L6715	VLQ0599J820	COIL 82UH	1		Q6706	MSC2295	TRANSISTOR	1	
L6716	VLQ0599J220	COIL 22UH	1		Q6707, 08	2SD601A	TRANSISTOR	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q7301, 02	2SD1996	TRANSISTOR	2	
Q7304	2SC2404	TRANSISTOR	1	
Q7305	MSD601-S	TRANSISTOR	1	
Q7308	2SB709A	TRANSISTOR	1	
Q7310	2SB709A	TRANSISTOR	1	
Q7311-13	MSD1328-S	TRANSISTOR	3	
Q7601, 02	2SD601A	TRANSISTOR	2	
QR1001	MUN2111	TRANSISTOR-RESISTOR	1	
QR1002	MUN2213	TRANSISTOR-RESISTOR	1	
QR1003	MUN2211	TRANSISTOR-RESISTOR	1	
QR2001	MUN2112	TRANSISTOR-RESISTOR	1	
QR2003	XN1213	TRANSISTOR-RESISTOR	1	
QR2004	MUN2213	TRANSISTOR-RESISTOR	1	
QR3001	MUN2211	TRANSISTOR-RESISTOR	1	
QR3002	MUN2213	TRANSISTOR-RESISTOR	1	
QR3003	MUN2212	TRANSISTOR-RESISTOR	1	
QR3004	MUN2211	TRANSISTOR-RESISTOR	1	
QR3006-08	MUN2212	TRANSISTOR-RESISTOR	3	
QR3009	MUN2111	TRANSISTOR-RESISTOR	1	
QR3011	MUN2212	TRANSISTOR-RESISTOR	1	
QR3015	MUN2212	TRANSISTOR-RESISTOR	1	
QR3016	MUN2211	TRANSISTOR-RESISTOR	1	
QR4001-04	MUN2212	TRANSISTOR-RESISTOR	4	
QR4651, 52	UN5213	TRANSISTOR-RESISTOR	2	
QR6001	XN1211	TRANSISTOR-RESISTOR	1	
QR6002	MUN2212	TRANSISTOR-RESISTOR	1	
QR6003	UN2116	TRANSISTOR-RESISTOR	1	
QR6004	MUN2211	TRANSISTOR-RESISTOR	1	
QR6701	MUN2211	TRANSISTOR-RESISTOR	1	
QR6702	UN2215	TRANSISTOR-RESISTOR	1	
QR6703, 04	MUN2211	TRANSISTOR-RESISTOR	2	
QR6705	MUN2213	TRANSISTOR-RESISTOR	1	
QR7301	MUN2213	TRANSISTOR-RESISTOR	1	
QR7302	MUN2112	TRANSISTOR-RESISTOR	1	
QR7601	MUN2213	TRANSISTOR-RESISTOR	1	
R0702	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R0704	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R0705	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R0706, 07	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2	
R0708	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R0709	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R0710	ERJ66EYJ154	M. RESISTOR CH 1/10W 150K	1	
R0713	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R0714	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R0715	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R0716	VRE0040E151	M. RESISTOR CH 1/10W 150	1	
R0717	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R0718	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R0719	ERJ66EYF822	M. RESISTOR CH 1/10W 8.2K	1	
R0720	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R0722	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R0728	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R0729	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R0732	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R0783	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R1001	ERDS1TJ272	C. RESISTOR 1/2W 2.7K	1	
R1002	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	1	
R1003	ERJ66MYG472	M. RESISTOR CH 1/10W 4.7K	1	
R1004, 05	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	2	
R1006	ERJ66MYG473	M. RESISTOR CH 1/10W 47K	1	
R1007	ERJ66MYG562	M. RESISTOR CH 1/10W 5.6K	1	
R1008	ERJ66MYG333	M. RESISTOR CH 1/10W 33K	1	
R1009	ERJ66MYG562	M. RESISTOR CH 1/10W 5.6K	1	
R1010	ERJ66MYG333	M. RESISTOR CH 1/10W 33K	1	
R1012	ERJ66MYG393	M. RESISTOR CH 1/10W 39K	1	
R1014	ERJ66MYG272	M. RESISTOR CH 1/10W 2.7K	1	
R1015	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R1016	ERDS2TJ122	C. RESISTOR 1/4W 1.2K	1	
R1020	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
R1021	ERJ66MYG272	M. RESISTOR CH 1/10W 2.7K	1	
R2022	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R2024	ERDS2FJ1R5	C. RESISTOR 1/4W 1.5	1	
R2027	ERDS2FJ1R2	C. RESISTOR 1/4W 1.2	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2028, 29	ERJ66MYJ223	M. RESISTOR CH 1/10W 22K	2	
R2030, 31	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	2	
R2032	ERJ66MYG562	M. RESISTOR CH 1/10W 5.6K	1	
R2033, 34	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	2	
R2035	ERJ66MYG222	M. RESISTOR CH 1/10W 2.2K	1	
R2036, 37	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	2	
R2038	ERJ66MYG392	M. RESISTOR CH 1/10W 3.9K	1	
R2039	ERJ66MYJ223	M. RESISTOR CH 1/10W 22K	1	
R2040	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R2041	ERJ66MYG471	M. RESISTOR CH 1/10W 470	1	
R2042	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R2043	ERJ66WZOR00	M. RESISTOR CH 1/10W 0	1	
R2044	ERJ66MYJ221	M. RESISTOR CH 1/10W 220	1	
R2045	ERJ66MYG272	M. RESISTOR CH 1/10W 2.7K	1	
R2046	ERJ66MYG332	M. RESISTOR CH 1/10W 3.3K	1	
R2047	ERJ66MYJ223	M. RESISTOR CH 1/10W 22K	1	
R2048	ERJ66MYG222	M. RESISTOR CH 1/10W 2.2K	1	
R2501	ERX12SJ47	M. RESISTOR 1/2W 0.47	1	
R2502	ERDS2TJ560	C. RESISTOR 1/4W 56	1	
R2503, 04	ERJ66MYG392	M. RESISTOR CH 1/10W 3.9K	2	
R2505, 06	ERJ66MYJ105	M. RESISTOR CH 1/10W 1M	2	
R2509	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	1	
R2510	ERJ66MYJ105	M. RESISTOR CH 1/10W 1M	1	
R2511	ERJ66MYG133	M. RESISTOR CH 1/10W 13K	1	
R2512	ERJ66MYG821	M. RESISTOR CH 1/10W 820	1	
R2513	ERJ66MYG681	M. RESISTOR CH 1/10W 680	1	
R2514, 15	ERDS2TJ560	C. RESISTOR 1/4W 56	2	
R2516	ERDS1TJ561	C. RESISTOR 1/2W 560	1	
R2517	ERJ66MYG222	M. RESISTOR CH 1/10W 2.2K	1	
R2518	ERJ66MYG432	M. RESISTOR CH 1/10W 4.3K	1	
R2519	ERJ66MYG473	M. RESISTOR CH 1/10W 47K	1	
R2520	ERJ66MYJ684	M. RESISTOR CH 1/10W 680K	1	
R2521	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R3001	ERJ66MYG153	M. RESISTOR CH 1/10W 15K	1	
R3002	ERJ66MYG821	M. RESISTOR CH 1/10W 820	1	
R3003	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R3004, 05	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	2	
R3006	ERJ66MYG222	M. RESISTOR CH 1/10W 2.2K	1	
R3007	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R3010	ERJ66MYG392	M. RESISTOR CH 1/10W 3.9K	1	
R3011	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	1	
R3012	ERJ66MYG152	M. RESISTOR CH 1/10W 1.5K	1	
R3013	ERJ66MYG203	M. RESISTOR CH 1/10W 20K	1	
R3014	ERJ66MYG183	M. RESISTOR CH 1/10W 18K	1	
R3015	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	1	
R3016	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R3017	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	1	
R3018	ERJ66MYG332	M. RESISTOR CH 1/10W 3.3K	1	
R3019	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R3020	ERJ66MYG302	M. RESISTOR CH 1/10W 3K	1	
R3021	ERJ66MYG272	M. RESISTOR CH 1/10W 2.7K	1	
R3022	ERJ66MYG512	M. RESISTOR CH 1/10W 5.1K	1	
R3023	ERJ66MYG123	M. RESISTOR CH 1/10W 12K	1	
R3024	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R3025, 26	ERJ66MYG102	M. RESISTOR CH 1/10W 1K	2	
R3027	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R3028	ERJ66MYJ683	M. RESISTOR CH 1/10W 68K	1	
R4001	ERJ66MYG100	M. RESISTOR CH 1/10W 10	1	
R4002	ERJ66MYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4003	ERDS2TJ680	C. RESISTOR 1/4W 68	1	
R4004, 05	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	2	
R4006	ERDS2TJ680	C. RESISTOR 1/4W 68	1	
R4007	ERJ66MYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4008	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R4009	ERJ66MYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4010	ERJ66MYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4011	ERJ66MYG123	M. RESISTOR CH 1/10W 12K	1	
R4012	ERJ66MYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4013	ERJ66MYJ163	M. RESISTOR CH 1/10W 16K	1	
R4014	ERJ66MYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4015	ERJ66MYG333	M. RESISTOR CH 1/10W 33K	1	
R4016	ERJ66MYJ223	M. RESISTOR CH 1/10W 22K	1	
R4017	ERJ66MYG133	M. RESISTOR CH 1/10W 1.3K	1	
R4018	ERJ66MYG103	M. RESISTOR CH 1/10W 10K	1	
R4019	ERJ66MYJ105	M. RESISTOR CH 1/10W 1M	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4020	ERJ6GMYG123	M. RESISTOR CH 1/10W 12K	1	
R4021	ERJ6GMYG393	M. RESISTOR CH 1/10W 39K	1	
R4022	ERJ6GMYG391	M. RESISTOR CH 1/10W 390	1	
R4023	ERJ6GMYG394	M. RESISTOR CH 1/10W 390K	1	
R4024	ERDS2TJ221	C. RESISTOR 1/4W 220	1	
R4025	ERJ6GMYG682	M. RESISTOR CH 1/10W 6.8K	1	
R4026	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
R4027, 28	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	2	
R4029	ERJ6GMYG912	M. RESISTOR CH 1/10W 9.1K	1	
R4030	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R4031	ERJ6GMYG202	M. RESISTOR CH 1/10W 2K	1	
R4032	ERJ6GMYG331	M. RESISTOR CH 1/10W 330	1	
R4033	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1	
R4034	ERJ6GMYG183	M. RESISTOR CH 1/10W 18K	1	
R4035, 36	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	2	
R4037	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R4038	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4039, 40	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2	
R4041-45	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	5	
R4046	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1	
R4047	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1	
R4048	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
R4049	ERJ6GMYG682	M. RESISTOR CH 1/10W 6.8K	1	
R4050	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1	
R4051	ERJ6GMYG682	M. RESISTOR CH 1/10W 6.8K	1	
R4052	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1	
R4053	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1	
R4054, 55	ERDS2TJ472	C. RESISTOR 1/4W 4.7K	2	
R4056	ERG1SJ122	M. RESISTOR 1W 1.2K	1	
R4057	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4058	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R4059	ERJ6GMYG393	M. RESISTOR CH 1/10W 39K	1	
R4060	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R4061	ERJ6GMYG153	M. RESISTOR CH 1/10W 15K	1	
R4062	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R4063	ERG2SJ821	M. RESISTOR 2W 820	1	
R4064	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1	
R4065, 66	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2	
R4067	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	
R4068	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1	
R4069	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	
R4070	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1	
R4071	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R4072	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R4073, 74	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	2	
R4075	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
R4076	ERJ6GMYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4503	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1	
R4504	ERJ3GEY0224	M. RESISTOR CH 1/16W 220K	1	
R4508	ERJ3GEY0224	M. RESISTOR CH 1/16W 220K	1	
R4512	ERJ3RBD123	M. RESISTOR CH 1/16W 12K	1	
R4513	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4517, 18	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	2	
R4519, 20	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4522	ERJ3GEYK225	M. RESISTOR CH 1/16W 2.2M	1	
R4528	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1	
R4529	ERJ3GEY0562	M. RESISTOR CH 1/16W 5.6K	1	
R4530	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R4534	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4542	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R4562	ERJ3RBD912	M. RESISTOR CH 1/16W 9.1K	1	
R4563	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R4584	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4585	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R4586	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4598	ERJ6RED124	M. RESISTOR CH 1/10W 120K	1	
R4599	ERJ6RED114	M. RESISTOR CH 1/10W 110K	1	
R4601	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R4603, 04	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R4605	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4606, 07	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R4608	ERDS2TJ103	C. RESISTOR 1/4W 10K	1	
R4621	ERJ6GEY0562	M. RESISTOR CH 1/10W 5.6K	1	
R4623	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R4624	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4690	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4695, 96	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R4697	ERJ6GEY0562	M. RESISTOR CH 1/10W 5.6K	1	
R4700	ERJ3GEYJ752	M. RESISTOR CH 1/16W 7.5K	1	
R4701	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4702	ERJ3GEYJ752	M. RESISTOR CH 1/16W 7.5K	1	
R4703	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6001	ERJ6GMYG223	M. RESISTOR CH 1/10W 22K	1	
R6002	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	1	
R6003	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R6004, 05	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	2	
R6006	ERJ6GMYG223	M. RESISTOR CH 1/10W 22K	1	
R6007	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R6008	ERJ6GMYG201	M. RESISTOR CH 1/10W 200	1	
R6009, 10	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2	
R6011	ERDS2TJ102	C. RESISTOR 1/4W 1K	1	
R6012	ERX1SJ1R8	M. RESISTOR 1W 1.8	1	
R6013	ERJ6GMYG512	M. RESISTOR CH 1/10W 5.1K	1	
R6014	ERJ6GMYG913	M. RESISTOR CH 1/10W 91K	1	
R6015	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R6016	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R6017, 18	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	2	
R6019	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R6020	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R6021	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R6022, 23	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2	
R6024	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R6025	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R6026	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R6027-31	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	5	
R6032	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	
R6033	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R6034	ERJ6GMYG222	M. RESISTOR CH 1/10W 2.2K	1	
R6035	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R6036, 37	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	2	
R6038, 39	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	2	
R6040	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R6041	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R6042, 43	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	2	
R6044, 45	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	2	
R6046	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
R6047	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R6050	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R6051	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R6052, 53	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2	
R6054	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R6056, 57	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	2	
R6059	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R6061	ERJ6GMYG183	M. RESISTOR CH 1/10W 18K	1	
R6062-66	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	5	
R6701	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R6702	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R6703	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R6704	ERJ6GMYG562	M. RESISTOR CH 1/10W 5.6K	1	
R6705	ERJ6GMYG911	M. RESISTOR CH 1/10W 910	1	
R6706, 07	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	2	
R6708	ERJ6GMYJ621	M. RESISTOR CH 1/10W 620	1	
R6709	ERJ6GMYG471	M. RESISTOR CH 1/10W 470	1	
R6710	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R6711, 12	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	2	
R6713	ERJ6GMYG273	M. RESISTOR CH 1/10W 27K	1	
R6714	ERJ6GMYJ474	M. RESISTOR CH 1/10W 470K	1	
R6715	ERJ6GMYG224	M. RESISTOR CH 1/10W 220K	1	
R6716	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1	
R6717, 18	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2	
R6719	ERJ6GMYG182	M. RESISTOR CH 1/10W 1.8K	1	
R6723	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1	
R6724-26	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	3	
R6727	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
R6728	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R6729	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
R6730	ERJ6GMYK225	M. RESISTOR CH 1/10W 2.2M	1	
R6731	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R6732, 33	ERJ6GMYJ105	M. RESISTOR CH 1/10W 1M	2	
R6734	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6735	ERJ6GMYG224	M. RESISTOR CH 1/10W 220K	1		R7611	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R6736	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1		R7612, 13	ER62SJ331	M. RESISTOR 2W 330	2	
R6737	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1		R7614	ERJ6GMYG561	M. RESISTOR CH 1/10W 560	1	
R6738	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1		R7615	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R6739	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1		R7616, 17	ERJ6GMYG151	M. RESISTOR CH 1/10W 150	2	
R6740-47	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	8		R7618	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R6748, 49	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2		R7619	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R6750	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1						
R6751	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1		RX6701	EXBF9E103J	RESISTOR-RESISTOR	1	
R6752	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1						
R6753	ERJ6GMYG562	M. RESISTOR CH 1/10W 5.6K	1		S6001	VST0176	SWITCH	1	
R6754	ERJ6GMYG153	M. RESISTOR CH 1/10W 15K	1		S6002	VES0709	SWITCH	1	
R6755	ERJ6GMYJ105	M. RESISTOR CH 1/10W 1M	1						
R6756	ERJ6GMYG271	M. RESISTOR CH 1/10W 270	1		T0703	EQV5EC071A	TRANSFORMER	1	
R6757	ERJ6GMYG273	M. RESISTOR CH 1/10W 27K	1		T0704	EQV5EC072A	TRANSFORMER	1	
R6758	ERJ6GMYG182	M. RESISTOR CH 1/10W 1.8K	1		T4001	EQ07QF025P	TRANSFORMER	1	
R6759	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1		T4002	EQ07QF026P	TRANSFORMER	1	
R6760	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1						
R6761	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	1		△ TU7601	ENG47258G1	TUNER	1	
R6762	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1						
R6763	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1		VR0701	EVNCBAA00B24	V. RESISTOR 20K	1	
R6765	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1		VR2001	EVNCGAA03B54	V. RESISTOR 50K	1	
R6766-68	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	3		VR4001	EVNCGAA03B54	V. RESISTOR 50K	1	
R6769	ERJ6GMYG822	M. RESISTOR CH 1/10W 8.2K	1		VR4501	EVMECSA00B53	V. RESISTOR 6.8K	1	
R6770	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1		VR4509	EVMECSA00B53	V. RESISTOR 5K	1	
R6771, 72	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	2		VR4550	EVMECSA00B14	V. RESISTOR 10K	1	
R6773	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1						
R6774	ERJ6GMYG222	M. RESISTOR CH 1/10W 2.2K	1		X0701	VLF1389	FILTER	1	
R6775	ERJ6GMYG122	M. RESISTOR CH 1/10W 1.2K	1		X0703	EFCT6M65MM3B	FILTER	1	
R6776	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1		X0704	VLF1369	FILTER	1	
R6778	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1		X6001	VSX0583	CRYSTAL OSCILLATOR	1	
R7301	ERJ6GEYG182	M. RESISTOR CH 1/10W 1.8K	1		X6701	VSX0875	CRYSTAL OSCILLATOR	1	
R7302	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		X6702	VSX0873	CRYSTAL OSCILLATOR	1	
R7303	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1		X6703	VSX0066	CRYSTAL OSCILLATOR	1	
R7308	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1		X7302	VSX0877	CRYSTAL OSCILLATOR	1	
R7309, 10	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	2		X7303	EF0EG4004A4	CERAMIC OSCILLATOR	1	
R7311	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1						
R7312	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	1		ZA3001	VWG1217	EARTH SPRING ANGLE	1	
R7313, 14	ERJ3GEYG272	M. RESISTOR CH 1/16W 2.7K	2						
R7315	ERJ3GEYJ114	M. RESISTOR CH 1/16W 110K	1		△ ZB6001, 02	VMD2329	PHOTO TRANSISTOR HOLDER	2	
R7316	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1		ZB6003	VMD2328	REEL GUIDE	1	
R7317	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		ZB6004	VMD2330	LED HOLDER	1	
R7320	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1						
R7321-23	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	3				MISCELLANEOUS		
R7324	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1			VSC3553	SHIELD COVER (MAIN)	1	FOR DECODER C. B. A.
R7325	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1			VSC3555	SHIELD COVER (BOTTOM)	1	FOR DECODER C. B. A.
R7326	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1			VMT0784	SPACER	1	FOR DECODER C. B. A.
R7327-29	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	3			VMP4471	TV DEMODULATOR ANGLE	1	FOR TV DEMOD. C. B. A.
R7330	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1						
R7332	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1						
R7333	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1		■ VEP06B83G	MAIN C. B. A.			(RTL) NV-HS950EG
R7334-36	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	3						
R7337	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		C0701, 02	ECUX1H1032FV	G. CAPACITOR CH 50V 0.01U	2	
R7339	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1		C0704	ECUX1H331JCV	G. CAPACITOR CH 50V 330P	1	
R7341-43	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	3		C0706	EGEA1HKA0R1	E. CAPACITOR 50V 0.1U	1	
R7344	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1		C0707, 08	ECUX1H1032FV	G. CAPACITOR CH 50V 0.01U	2	
R7345, 46	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2		C0709	ECUX1H120JCV	G. CAPACITOR CH 50V 12P	1	
R7350	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1		C0710	ECUX1H470JPV	G. CAPACITOR CH 50V 47P	1	
R7351	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		C0711	EGEA1CKA100	E. CAPACITOR 16V 10U	1	
R7352-56	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5		C0712	ECUX1H1032FV	G. CAPACITOR CH 50V 0.01U	1	
R7357	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		C0714	EQQB1H473JF	P. CAPACITOR 50V 0.047U	1	
R7362	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1		C0715	ECUM1H1032FN	G. CAPACITOR CH 50V 0.01U	1	
R7366	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1		C0716	EGEA1CKA470	E. CAPACITOR 16V 47U	1	
R7367	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		C0717	ECUX1H270JPV	G. CAPACITOR CH 50V 27P	1	
R7368	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1		C0718	EGEA1HKS47	E. CAPACITOR 50V 0.47U	1	
R7370	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		C0719	ECUX1H120JCV	G. CAPACITOR CH 50V 12P	1	
R7376, 77	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2		C0720	ECUX1H1032FV	G. CAPACITOR CH 50V 0.01U	1	
R7378	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1		C0723	EGEA1HKA0R1	E. CAPACITOR 50V 0.1U	1	
R7379	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		C0726	ECUX1H1032FV	G. CAPACITOR CH 50V 0.01U	1	
R7381	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		C0730	ECUX1H1032FV	G. CAPACITOR CH 50V 0.01U	1	
R7383	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		C0732	ECUX1H1032FV	G. CAPACITOR CH 50V 0.01U	1	
R7602, 03	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	2		C1001	ECUM1H1032FN	G. CAPACITOR CH 50V 0.01U	1	
R7605-07	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	3		C1002	EGEA1CU470	E. CAPACITOR 16V 47U	1	
R7609	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1		C1003	EGEA1CKS101	E. CAPACITOR 16V 100U	1	
R7610	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1		C1004	ECUM1H1032FN	G. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1005	ECEA1KA220	E. CAPACITOR 10V 22U	1		C4013, 14	ECUM1H223KBN	C. CAPACITOR CH 50V 0.022U	2	
C1006	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		C4016	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C1007	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4017	ECUM1H682KBN	C. CAPACITOR CH 50V 6800P	1	
C1008	ECEA1KA220	E. CAPACITOR 10V 22U	1		C4018	ECEATHKS0R1	E. CAPACITOR 50V 0.1U	1	
C1009	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		C4019, 20	ECEATHKA0R1	E. CAPACITOR 50V 0.1U	2	
C1013	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1		C4021	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C1014	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4022	ECUM1H682KBN	C. CAPACITOR CH 50V 6800P	1	
C1016	ECEA1KA220	E. CAPACITOR 10V 22U	1		C4023	ECUM1G105ZFN	C. CAPACITOR CH 16V 1U	1	
C1019	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4024	ECUM1H272KBN	C. CAPACITOR CH 50V 2700P	1	
C1020	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		C4025, 26	ECEATCKA220	E. CAPACITOR 16V 22U	2	
C2030	ECUM1H473ZFN	G. CAPACITOR CH 50V 0.047U	1		C4027	ECEATHKS3R3	E. CAPACITOR 50V 3.3U	1	
C2032-34	ECEA1VKN2R2	E. CAPACITOR 35V 2.2U	3		C4028	ECEATCKA470	E. CAPACITOR 16V 47U	1	
C2035	ECUM1E683KBN	G. CAPACITOR CH 25V 0.068U	1		C4029, 30	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	2	
C2036-38	ECUM1E104KBN	G. CAPACITOR CH 25V 0.1U	3		C4031	ECEA1CKS101	E. CAPACITOR 16V 100U	1	
C2040	ECUM1C274KBN	C. CAPACITOR CH 16V 0.27U	1		C4032	ECUM1H822KBN	C. CAPACITOR CH 50V 8200P	1	
C2041	ECEA1HKA47	E. CAPACITOR 50V 0.47U	1		C4033, 34	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	2	
C2042	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1		C4035	ECUM1H562KBN	C. CAPACITOR CH 50V 5600P	1	
C2047	ECEA1AKS221	E. CAPACITOR 10V 220U	1		C4036	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C2048	ECUM1H472KBN	C. CAPACITOR CH 50V 4700P	1		C4037	ECEATCKS100	E. CAPACITOR 16V 10U	1	
C2049	ECQV1H683B46	P. CAPACITOR 50V 0.068U	1		C4038	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2050, 51	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2		C4039	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C2052, 53	ECUM1G105ZFN	G. CAPACITOR CH 16V 1U	2		C4040	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	1	
C2054, 55	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2		C4042	ECUM1H222JCN	C. CAPACITOR CH 50V 2200P	1	
C2056	ECEA1EKS47	E. CAPACITOR 25V 4.7U	1		C4043	ECEA0JKA331	E. CAPACITOR 6.3V 330U	1	
C2057, 58	ECEA1ESN3R3	E. CAPACITOR 25V 3.3U	2		C4044	ECEATHKA47	E. CAPACITOR 50V 4.7U	1	
C2059	ECUM1H222KBN	G. CAPACITOR CH 50V 2200P	1		C4045	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2060	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1		C4046	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C2061	ECEA1AKS221	E. CAPACITOR 10V 220U	1		C4047	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2062	ECEA1CKS100	E. CAPACITOR 16V 10U	1		C4048, 49	ECEATCKA100	E. CAPACITOR 16V 10U	2	
C2063	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4050	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2064	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C4501	ECUX1H681JCV	C. CAPACITOR CH 50V 680P	1	
C2065	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C4502	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C2066	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4503	ECUX1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C2067	ECUM1H223KBN	G. CAPACITOR CH 50V 0.022U	1		C4506	ECA1CAK100X	E. CAPACITOR 16V 10U	1	
C2068	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1		C4507	ECQB1H223JF	P. CAPACITOR 50V 0.022U	1	
C2069	ECUM1H392KBN	G. CAPACITOR CH 50V 3900P	1		C4508	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C2070	ECUM1H222KBN	G. CAPACITOR CH 50V 2200P	1		C4509	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C2071	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1		C4510	ECQB1H103JF	P. CAPACITOR 50V 0.01U	1	
C2501	ECEA1HKS2R2	E. CAPACITOR 50V 2.2U	1		C4511	ECQB1H332JF	P. CAPACITOR 50V 3300P	1	
C2502	ECA1CM221	E. CAPACITOR 16V 220U	1		C4512	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C2504, 05	ECUM1C474ZFN	C. CAPACITOR CH 16V 0.47U	2		C4513	ECUM1H681JCN	C. CAPACITOR CH 50V 680P	1	
C2506, 07	ECUM1H680JCN	G. CAPACITOR CH 50V 68P	2		C4514	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C2508-10	ECUM1H333KBN	G. CAPACITOR CH 50V 0.033U	3		C4515	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C2511	ECUM1E104KBN	G. CAPACITOR CH 25V 0.1U	1		C4521	ECUM1H473KBN	C. CAPACITOR CH 50V 0.047U	1	
C2512	ECEA1HKS2R2	E. CAPACITOR 50V 2.2U	1		C4522	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C2513	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	1		C4530	ECA0JAK470X	E. CAPACITOR 6.3V 47U	1	
C2514	ECA1EM470	E. CAPACITOR 25V 47U	1		C4533	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C2515	ECEA1HKNR22	E. CAPACITOR 50V 0.22U	1		C4537	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	1	
C2516	ECEA1HKA010	E. CAPACITOR 50V 1U	1		C4538	ECA1HAKR47X	E. CAPACITOR 50V 0.47U	1	
C2518, 19	ECUM1H333KBN	G. CAPACITOR CH 50V 0.033U	2		C4541	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2520	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4551	ECQB1H223JF	P. CAPACITOR 50V 0.022U	1	
C2521	ECA0JW221	E. CAPACITOR 6.3V 220U	1		C4556	ECA1CAK100X	E. CAPACITOR 16V 10U	1	
C2524	ECQV1H683B46	P. CAPACITOR 50V 0.068U	1		C4558	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C2525, 26	ECUM1H102KBN	G. CAPACITOR CH 50V 1000P	2		C4559	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C3001	ECEA1CKS470	E. CAPACITOR 16V 47U	1		C4560	ECQB1H103JF	P. CAPACITOR 50V 0.01U	1	
C3002, 03	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	2		C4561	ECQB1H332JF	P. CAPACITOR 50V 3300P	1	
C3004	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C4562	ECUX1H561JCV	C. CAPACITOR CH 50V 560P	1	
C3005-07	ECUM1H102JCN	G. CAPACITOR CH 50V 1000P	3		C4565	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C3008-11	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	4		C4569	ECUX1G104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C3012	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1		C4572	ECA1HAK4R7X	E. CAPACITOR 50V 4.7U	1	
C3013	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4576	ECUM1H473KBN	C. CAPACITOR CH 50V 0.047U	1	
C3014	ECUM1H102KBN	G. CAPACITOR CH 50V 1000P	1		C4585, 86	ECA0JAK101X	E. CAPACITOR 6.3V 100U	2	
C3015	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1		C4587	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3016-19	ECUM1H102KBN	G. CAPACITOR CH 50V 1000P	4		C4591	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1	
C3020	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		C4592	ECUX1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4001	ECEA1KA220	E. CAPACITOR 10V 22U	1		C4671, 72	ECA1CAK100X	E. CAPACITOR 16V 10U	2	
C4002	ECQB1H223JF	P. CAPACITOR 50V 0.022U	1		C4673	ECUX1G104ZFN	C. CAPACITOR CH 16V 0.1U	1	
C4003	ECKD2H471KB5	G. CAPACITOR 500V 470P	1		C4674	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4004, 05	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	2		C4676	ECA1VAK470X	E. CAPACITOR 35V 47U	1	
C4006, 07	ECEA1CKA100	E. CAPACITOR 16V 10U	2		C4677	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C4008	ECEA1KA101	E. CAPACITOR 10V 100U	1		G6001, 02	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C4009	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1		G6004	ECA1EM470	E. CAPACITOR 25V 47U	1	
C4010	ECUM1H682KBN	G. CAPACITOR CH 50V 6800P	1		G6005	ECUM1G224ZFN	C. CAPACITOR CH 16V 0.22U	1	
C4011	ECQV1H104B46	P. CAPACITOR 50V 0.1U	1		G6006-10	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	5	
C4012	ECUM1H222JCN	G. CAPACITOR CH 50V 2200P	1		G6011	ECEA1HKS2R2	E. CAPACITOR 50V 2.2U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6012	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6013	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C6014, 15	EGUM1H150JCN	C. CAPACITOR CH 50V 15P	2	
C6016, 17	EGUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C6018	EGUX1H561JCN	C. CAPACITOR CH 50V 560P	1	
C6019-22	EGUM1H271JCN	C. CAPACITOR CH 50V 270P	4	
C6023	ECEATCKS100	E. CAPACITOR 16V 10U	1	
C6024	EGUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6025	EGUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6026	EGUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6027, 28	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6701	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C6702, 03	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6704	EGUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C6705, 06	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6707	EGUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6708	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6709	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1	
C6710	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C6711	ECAOJW331	E. CAPACITOR 6.3V 330U	1	
C6712	ECEATHKA010	E. CAPACITOR 50V 1U	1	
C6713	EGUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C6714	ECEATHKA010	E. CAPACITOR 50V 1U	1	
C6715	EGUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C6716	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C6717	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C6718	ECAOJW331	E. CAPACITOR 6.3V 330U	1	
C6719, 20	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6721	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C6722	ECAOJW331	E. CAPACITOR 6.3V 330U	1	
C6723	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6724	EGUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6725	EGUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C6726	EGUM1H102JCN	C. CAPACITOR CH 50V 1000P	1	
C6727	EGUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C6728, 29	EGUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C6730	EGUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C6731	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6732	ECEATHKA010	E. CAPACITOR 50V 1U	1	
C6735, 36	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6737	ECEATHKA2R2	E. CAPACITOR 50V 2.2U	1	
C6738	EGUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C6739, 40	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6741, 42	ECEATHKA010	E. CAPACITOR 50V 1U	2	
C6743	EGUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C6745	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C6748	EGUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C6749	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C6750	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6752, 53	EGUM1H221JCN	C. CAPACITOR CH 50V 220P	2	
C6754	ECEATHKS2R2	E. CAPACITOR 50V 2.2U	1	
C6755	EGUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6756, 57	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6758	EGUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6759	EGUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6760	EGUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C6761	EGUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6763	EGUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6764, 65	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6766	ECEATHKA010	E. CAPACITOR 50V 1U	1	
C6770	EGUM1H391JCN	C. CAPACITOR CH 50V 390P	1	
C7301, 02	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C7303	ECEATCKA470	E. CAPACITOR 16V 47U	1	
C7304	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7305	ECEATCKA220	E. CAPACITOR 16V 22U	1	
C7306	EGUX1H391JCN	C. CAPACITOR CH 50V 390P	1	
C7309-12	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	4	
C7313	ECEAOJKA220	E. CAPACITOR 6.3V 22U	1	
C7314	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7315	ECEATEKA4R7	E. CAPACITOR 25V 4.7U	1	
C7317, 18	EGUX1H040CCV	C. CAPACITOR CH 50V 4P	2	
C7320	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1	
C7321	EGUX1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7322	ECEATEKA4R7	E. CAPACITOR 25V 4.7U	1	
C7323, 24	EGUX1H391JCN	C. CAPACITOR CH 50V 390P	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7325, 26	ECEATCKA100	E. CAPACITOR 16V 10U	2	
C7327	EGUX1G104ZFN	G. CAPACITOR CH 16V 0.1U	1	
C7328	ECEATCKA470	E. CAPACITOR 16V 47U	1	
C7329, 30	EGUX1H471JCN	G. CAPACITOR CH 50V 470P	2	
C7331	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C7332, 33	EGUX1G104ZFN	G. CAPACITOR CH 16V 0.1U	2	
C7334	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1	
C7335	EGUX1G104ZFN	G. CAPACITOR CH 16V 0.1U	1	
C7338	EGUM1H471JCN	G. CAPACITOR CH 50V 470P	1	
C7339	EGUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C7340	EGUM1H270JCN	G. CAPACITOR CH 50V 27P	1	
C7341	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C7342	EGUM1H561JCN	G. CAPACITOR CH 50V 560P	1	
C7343	ECEATHKA010	E. CAPACITOR 50V 1U	1	
C7344	EGUM1H471JCN	G. CAPACITOR CH 50V 470P	1	
C7345	EGUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C7346	EGUM1H270JCN	G. CAPACITOR CH 50V 27P	1	
C7347	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C7348	EGUM1H561JCN	G. CAPACITOR CH 50V 560P	1	
C7350	ECEATHKA010	E. CAPACITOR 50V 1U	1	
C7351	EGUM1H471JCN	G. CAPACITOR CH 50V 470P	1	
C7352	EGUM1H182KBN	C. CAPACITOR CH 50V 1800P	1	
C7353	EGUM1H270JCN	G. CAPACITOR CH 50V 27P	1	
C7354	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C7355	EGUM1H561JCN	G. CAPACITOR CH 50V 560P	1	
C7357	EGUX1G104ZFN	G. CAPACITOR CH 16V 0.1U	1	
C7358	ECEATHKA3R3	E. CAPACITOR 50V 3.3U	1	
C7359	EGUX1G104ZFN	G. CAPACITOR CH 16V 0.1U	1	
C7365, 66	ECEATHKA010	E. CAPACITOR 50V 1U	2	
C7369	ECEAOJKA470	E. CAPACITOR 6.3V 47U	1	
C7370	EGUX1G104ZFN	G. CAPACITOR CH 16V 0.1U	1	
C7371, 72	EGUX1H103ZFN	G. CAPACITOR CH 50V 0.01U	2	
C7374, 75	EGUX1H150JCN	G. CAPACITOR CH 50V 15P	2	
C7601	EGUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7604	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1	
C7605	EGUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1	
C7606	ECEATCKA101	E. CAPACITOR 16V 100U	1	
C7607	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1	
C7608, 09	ECEAOJKA101	E. CAPACITOR 6.3V 100U	2	
C7610	EGUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1	
C7611	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1	
C7614	ECEATHKA100	E. CAPACITOR 50V 10U	1	
C7615	ECEATHKA010	E. CAPACITOR 50V 1U	1	
C7617	EGUM1H150JCN	G. CAPACITOR CH 50V 15P	1	
D1001	MA4110H	DIODE	1	
D1002, 03	1SS254	DIODE	2	
D1004	MA4051-M	DIODE	1	
D1005	1SS254	DIODE	1	
D1006	MA4051-M	DIODE	1	
D1007	1SS254	DIODE	1	
D1009, 10	1SS254	DIODE	2	
D2005-08	1SS355	DIODE	4	
D2009-13	1SS254	DIODE	5	
D2501	11ES1	DIODE	1	
D2502	MA157	DIODE	1	
D2503, 04	1SS254	DIODE	2	
D3002	MA151WK	DIODE	1	
D3005, 06	1SS254	DIODE	2	
D3012-14	1SS254	DIODE	3	
D4001	MA4056-M	DIODE	1	
D4002-04	1SS254	DIODE	3	
D4005	MA4075	DIODE	1	
D4006, 07	1SS254	DIODE	2	
D4013	1SS254	DIODE	1	
D4504	1SS254	DIODE	1	
D6001	LN59LT. VT	LED	1	
D6002	MA4075-L	DIODE	1	
D6003	1SS254	DIODE	1	
D6701, 02	1SS254	DIODE	2	
D6704	MA723-VT	DIODE	1	
D6705, 06	1SS254	DIODE	2	
D7301	MA3082-L	DIODE	1	
D7302	MA151K	DIODE	1	
D7303	MA151WK	DIODE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D7304	MA717	DIODE	1		L7607	VLQ0599J680	COIL 68UH	1	
D7306	MA151WK	DIODE	1		L7608	VLQ0163J2R2	COIL 2.2UH	1	
D7308	MA723-VT	DIODE	1						
D7601	MA4300-M	DIODE	1		LB3001	VLP0085	COIL	1	
D7602	1SS254	DIODE	1		LB4001	VLP0083	COIL	1	
D7604	1SS254	DIODE	1		LB6001	VLP0074	COIL	1	
					LB6002-08	VLP0145	COIL	7	
FL7301, 02	VLFO633	FILTER	2		LB6701, 02	VLP0145	COIL	2	
FL7601	ELB4H020	FILTER	1		LB6703-06	VLP0083	COIL	4	
					LB6709-14	VLP0145	COIL	6	
IC0701	LA7576	IC	1		LB7601	VLP0099	COIL	1	
IC1002	HA17431PA	IC	1		LB7602	VLP0083	COIL	1	
IC2002	AN3814K	IC	1						
IC2501	BA6871BS	IC	1		P1001	VJS3631A011A	CONNECTOR (FEMALE) 11P	1	
IC3002	MG14053BF	IC	1		P2004	VJP1236T	CONNECTOR (MALE) 9P	1	
IC4001	BA7795FS	IC	1		P2501	VJS3537A015G	CONNECTOR (FEMALE) 15P	1	
IC4002	MG14053BF	IC	1		P2502	VJP3483	CONNECTOR (MALE) 3P	1	
IC4003	NJM4565DD	IC	1		P3001	VJS3537A020G	CONNECTOR (FEMALE) 20P	1	
IC4004	NJM4558M	IC	1		P3002	VJS3673B025G	CONNECTOR (FEMALE) 25P	1	
IC4501	BH7778AK	IC	1		P3003	VJS3673B023G	CONNECTOR (FEMALE) 23P	1	
IC4502	BU4052BCF	IC	1		P3004	VJS3537A011G	CONNECTOR (FEMALE) 11P	1	
IC4503	BA7735FS	IC	1		P3005	VJP1231T	CONNECTOR (MALE) 4P	1	
IC4681	BA4558F	IC	1		P4001	VJS3675A006G	CONNECTOR (FEMALE) 6P	1	
IC6001	MM675536VR9W	IC	1		P4002	VJP1230T	CONNECTOR (MALE) 3P	1	
IC6002	BA6887-V3	IC	1		P6001	VJS3821	CONNECTOR (FEMALE) 4P	1	
IC6003, 04	ON1387	PHOTO INTERRUPTER	2		P6002	VJS3640A002	CONNECTOR (FEMALE) 2P	1	
IC6701	BH7236AF	IC	1						
IC6702	ST24W16FB6	IC	1		PK0701	VJR0816E010W	CONNECTOR (MALE) 10P	1	
IC6703	S80743AL	IC	1		PK4501	VJR0777B008W	CONNECTOR (MALE) 8P	1	
IC6704	SA5281ZPM3	IC	1		PK4502	VJR0777B013W	CONNECTOR (MALE) 13P	1	
IC6705	TC7W74F	IC	1		PK4503	VJR0777B010W	CONNECTOR (MALE) 10P	1	
IC6706	SABC513AL16P	IC	1		PK7301	VJR0777B009W	CONNECTOR (MALE) 9P	1	
IC6707	NJM2513M	IC	1		PK7302	VJR0777B008W	CONNECTOR (MALE) 8P	1	
IC6708	T74HC573AF	IC	1						
IC6709	AN3581S	IC	1		PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
IC6710	M27C1001FAAA	IC	1		PP3001, 02	VJP3186A018W	CONNECTOR (MALE) 18P	2	
IC7301	MSP3410B-F7	IC	1		PP3003	VJP3042G007W	CONNECTOR (MALE) 7P	1	
IC7302	PST7043	IC	1		PP4001	VJP3042G016W	CONNECTOR (MALE) 16P	1	
IC7303	M5238FP	IC	1		PP4002	VJP3042G013W	CONNECTOR (MALE) 13P	1	
IC7304	HA17431PA	IC	1		PP4003, 04	VJP3042G020W	CONNECTOR (MALE) 20P	2	
IC7305	MM155402VZFA	IC	1						
IC7306	PST7043	IC	1						
K0702	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1	Q0701	MSD601-S	TRANSISTOR	1	
K0704, 05	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	2	Q0702	MSB709-R	TRANSISTOR	1	
K2001, 02	ERJ6GMZOR00	M. RESISTOR CH 1/10W	0	2	Q1001	2SD25440PQA	TRANSISTOR	1	
K4665	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1	Q1002, 03	2SD1996-S	TRANSISTOR	2	
K7304-07	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	4	Q1004	2SB1321A	TRANSISTOR	1	
K7314	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1	Q1005	2SD1991A	TRANSISTOR	1	
K7317	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1	Q1006	2SD602A	TRANSISTOR	1	
K7601	ERJ6GMZOR00	M. RESISTOR CH 1/10W	0	1	Q1007	2SD601A	TRANSISTOR	1	
K7605	ERJ6GMZOR00	M. RESISTOR CH 1/10W	0	1	Q1009	2SD1996-S	TRANSISTOR	1	
					Q1010, 11	MSD1328	TRANSISTOR	2	
					Q1015, 16	2SD1996-S	TRANSISTOR	2	
L0701	VLQ0163JR18	COIL 0.18UH	1		Q3001	2SD601A	TRANSISTOR	1	
L0705	VLQ0163J5R6	COIL 5.6UH	1		Q3002	2SB709A	TRANSISTOR	1	
L0706	VLQEL05S150K	COIL 15UH	1		Q3003	2SD601A	TRANSISTOR	1	
L2002	VLQ0599J101	COIL 100UH	1		Q3011	MSD602	TRANSISTOR	1	
L2501	ELESE102KA	COIL 1000UH	1		Q3012	MSB710	TRANSISTOR	1	
L3001	VLQ0599J680	COIL 68UH	1		Q3013	MSD602	TRANSISTOR	1	
L4001, 02	VLQ0599J680	COIL 68UH	2		Q3014	MSB710	TRANSISTOR	1	
L4003, 04	ERJ6GMZOR00	M. RESISTOR CH 1/10W	0	2	Q3015	2SD601A	TRANSISTOR	1	
L4005, 06	VLQ0599J680	COIL 68UH	2		Q4001	2SB710A	TRANSISTOR	1	
L4007	VLQ0123	COIL	1		Q4002, 03	2SD601A	TRANSISTOR	2	
L6002-04	VLQ0599J680	COIL 68UH	3		Q4006	2SB710A	TRANSISTOR	1	
L6702	VLQ0599J680	COIL 68UH	1		Q4007-09	2SD601A	TRANSISTOR	3	
L6703	VLQ0599J3R3	COIL 3.3UH	1		Q4501	2SD1468	TRANSISTOR	1	
L6704	VLQ0599J330	COIL 33UH	1		Q4551	2SA1515	TRANSISTOR	1	
L6705	VLQ0599J270	COIL 27UH	1		Q6001	2SB709A	TRANSISTOR	1	
L6709	VLQ0599J680	COIL 68UH	1		Q6002, 03	PN205LT-NCVT	PHOTO TRANSISTOR	2	
L6710	VLQ0599J390	COIL 39UH	1		Q6701-05	2SD601A	TRANSISTOR	5	
L6715	VLQ0599J820	COIL 82UH	1		Q6706	MSG2295	TRANSISTOR	1	
L6716	VLQ0599J220	COIL 22UH	1		Q6707, 08	2SD601A	TRANSISTOR	2	
L7301	ELEXH100JBV	INDUCTOR 10UH	1		Q7301, 02	2SD1996	TRANSISTOR	2	
L7302	ERJ6GEYOR00	M. RESISTOR CH 1/10W	0	1	Q7304	2SC2404	TRANSISTOR	1	
L7603, 04	VLQ0599J680	COIL 68UH	2		Q7305	MSD601-S	TRANSISTOR	1	
					Q7308-10	2SB709A	TRANSISTOR	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q7311-13	MSD1328-S	TRANSISTOR	3	
Q7601, 02	2SD601A	TRANSISTOR	2	
QR1001	MUN2111	TRANSISTOR-RESISTOR	1	
QR1002	MUN2213	TRANSISTOR-RESISTOR	1	
QR1003	MUN2211	TRANSISTOR-RESISTOR	1	
QR2001	MUN2112	TRANSISTOR-RESISTOR	1	
QR2003	XN1213	TRANSISTOR-RESISTOR	1	
QR2004	MUN2213	TRANSISTOR-RESISTOR	1	
QR3001	MUN2211	TRANSISTOR-RESISTOR	1	
QR3002	MUN2213	TRANSISTOR-RESISTOR	1	
QR3003	MUN2212	TRANSISTOR-RESISTOR	1	
QR3004	MUN2211	TRANSISTOR-RESISTOR	1	
QR3006-08	MUN2212	TRANSISTOR-RESISTOR	3	
QR3009	MUN2111	TRANSISTOR-RESISTOR	1	
QR3011	MUN2212	TRANSISTOR-RESISTOR	1	
QR3015	MUN2212	TRANSISTOR-RESISTOR	1	
QR3016	MUN2211	TRANSISTOR-RESISTOR	1	
QR4001-04	MUN2212	TRANSISTOR-RESISTOR	4	
QR4651, 52	UN5213	TRANSISTOR-RESISTOR	2	
QR6001	XN1211	TRANSISTOR-RESISTOR	1	
QR6002	MUN2212	TRANSISTOR-RESISTOR	1	
QR6003	UN2116	TRANSISTOR-RESISTOR	1	
QR6004	MUN2211	TRANSISTOR-RESISTOR	1	
QR6701	MUN2211	TRANSISTOR-RESISTOR	1	
QR6702	UN2215	TRANSISTOR-RESISTOR	1	
QR6703, 04	MUN2211	TRANSISTOR-RESISTOR	2	
QR6705	MUN2213	TRANSISTOR-RESISTOR	1	
QR7301	MUN2213	TRANSISTOR-RESISTOR	1	
QR7302	MUN2112	TRANSISTOR-RESISTOR	1	
QR7601	MUN2213	TRANSISTOR-RESISTOR	1	
R0704	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R0705	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R0706, 07	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2	
R0708	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R0709	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R0710	ERJ6GEYJ154	M. RESISTOR CH 1/10W 150K	1	
R0713	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R0714	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R0715	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R0716	VRE0040E151	M. RESISTOR CH 1/10W 150	1	
R0717	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R0718	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R0719	ERJ6GEYF822	M. RESISTOR CH 1/10W 8.2K	1	
R0720	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R0722	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R0728	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R0729	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R0732	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R0783	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R1001	ERDS1TJ272	C. RESISTOR 1/2W 2.7K	1	
R1002	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R1003	ERJ6GEYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R1004, 05	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	2	
R1006	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	1	
R1007	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R1008	ERJ6GEYJ333	M. RESISTOR CH 1/10W 33K	1	
R1009	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R1010	ERJ6GEYJ333	M. RESISTOR CH 1/10W 33K	1	
R1012	ERJ6GEYJ393	M. RESISTOR CH 1/10W 39K	1	
R1014	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R1015	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R1016	ERDS2TJ122	C. RESISTOR 1/4W 1.2K	1	
R1020	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
R1021	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R2022	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R2024	ERDS2FJ1R5	C. RESISTOR 1/4W 1.5	1	
R2027	ERDS2FJ1R2	C. RESISTOR 1/4W 1.2	1	
R2028, 29	ERJ6GEYJ223	M. RESISTOR CH 1/10W 22K	2	
R2030, 31	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	2	
R2032	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R2033, 34	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	2	
R2035	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R2036, 37	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R2038	ERJ6GEYJ392	M. RESISTOR CH 1/10W 3.9K	1	
R2039	ERJ6GEYJ223	M. RESISTOR CH 1/10W 22K	1	
R2040	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R2041	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R2042	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R2043	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R2044	ERJ6GEYJ221	M. RESISTOR CH 1/10W 220	1	
R2045	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R2046	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R2047	ERJ6GEYJ223	M. RESISTOR CH 1/10W 22K	1	
R2048	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R2501	ERX12SJR47	M. RESISTOR 1/2W 0.47	1	
R2502	ERDS2TJ560	C. RESISTOR 1/4W 56	1	
R2503, 04	ERJ6GEYJ392	M. RESISTOR CH 1/10W 3.9K	2	
R2505, 06	ERJ6GEYJ105	M. RESISTOR CH 1/10W 1M	2	
R2509	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R2510	ERJ6GEYJ105	M. RESISTOR CH 1/10W 1M	1	
R2511	ERJ6GEYJ133	M. RESISTOR CH 1/10W 13K	1	
R2512	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820	1	
R2513	ERJ6GEYJ681	M. RESISTOR CH 1/10W 680	1	
R2514, 15	ERDS2TJ560	C. RESISTOR 1/4W 56	2	
R2516	ERDS1TJ561	C. RESISTOR 1/2W 560	1	
R2517	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R2518	ERJ6GEYJ432	M. RESISTOR CH 1/10W 4.3K	1	
R2519	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	1	
R2520	ERJ6GEYJ684	M. RESISTOR CH 1/10W 680K	1	
R2521	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R3001	ERJ6GEYJ153	M. RESISTOR CH 1/10W 15K	1	
R3002	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820	1	
R3003	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R3004, 05	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	2	
R3006	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R3007	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R3010	ERJ6GEYJ392	M. RESISTOR CH 1/10W 3.9K	1	
R3011	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R3012	ERJ6GEYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R3013	ERJ6GEYJ203	M. RESISTOR CH 1/10W 20K	1	
R3014	ERJ6GEYJ183	M. RESISTOR CH 1/10W 18K	1	
R3015	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R3016	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R3017	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R3018	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R3019	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R3020	ERJ6GEYJ302	M. RESISTOR CH 1/10W 3K	1	
R3021	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R3022	ERJ6GEYJ512	M. RESISTOR CH 1/10W 5.1K	1	
R3023	ERJ6GEYJ123	M. RESISTOR CH 1/10W 12K	1	
R3024	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R3025, 26	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	2	
R3027	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R3028	ERJ6GEYJ683	M. RESISTOR CH 1/10W 68K	1	
R4001	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
R4002	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R4003	ERDS2TJ680	C. RESISTOR 1/4W 68	1	
R4004, 05	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	2	
R4006	ERDS2TJ680	C. RESISTOR 1/4W 68	1	
R4007	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R4008	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R4009	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R4010	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R4011	ERJ6GEYJ123	M. RESISTOR CH 1/10W 12K	1	
R4012	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R4013	ERJ6GEYJ163	M. RESISTOR CH 1/10W 16K	1	
R4014	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R4015	ERJ6GEYJ333	M. RESISTOR CH 1/10W 33K	1	
R4016	ERJ6GEYJ223	M. RESISTOR CH 1/10W 22K	1	
R4017	ERJ6GEYJ133	M. RESISTOR CH 1/10W 1.3K	1	
R4018	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R4019	ERJ6GEYJ105	M. RESISTOR CH 1/10W 1M	1	
R4020	ERJ6GEYJ123	M. RESISTOR CH 1/10W 12K	1	
R4021	ERJ6GEYJ393	M. RESISTOR CH 1/10W 39K	1	
R4022	ERJ6GEYJ391	M. RESISTOR CH 1/10W 390	1	
R4023	ERJ6GEYJ394	M. RESISTOR CH 1/10W 390K	1	
R4024	ERDS2TJ221	C. RESISTOR 1/4W 220	1	
R4025	ERJ6GEYJ682	M. RESISTOR CH 1/10W 6.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4026	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1		R4703	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4027, 28	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	2		R6001	ERJ6GMYG223	M. RESISTOR CH 1/10W 22K	1	
R4029	ERJ6GMYG912	M. RESISTOR CH 1/10W 9.1K	1		R6002	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	1	
R4030	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1		R6003	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R4031	ERJ6GMYG202	M. RESISTOR CH 1/10W 2K	1		R6004, 05	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	2	
R4032	ERJ6GMYG331	M. RESISTOR CH 1/10W 330	1		R6006	ERJ6GMYG223	M. RESISTOR CH 1/10W 22K	1	
R4033	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1		R6007	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R4034	ERJ6GMYG183	M. RESISTOR CH 1/10W 18K	1		R6008	ERJ6GMYG201	M. RESISTOR CH 1/10W 200	1	
R4035, 36	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	2		R6009, 10	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2	
R4037	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1		R6011	ERDS2TJ102	C. RESISTOR 1/4W 1K	1	
R4038	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1		R6012	ERX1SJ1R8	M. RESISTOR 1W 1.8	1	
R4039, 40	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2		R6013	ERJ6GMYG512	M. RESISTOR CH 1/10W 5.1K	1	
R4041-45	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	5		R6014	ERJ6GMYG913	M. RESISTOR CH 1/10W 91K	1	
R4046	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1		R6015	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R4047	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1		R6016	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R4048	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1		R6017, 18	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	2	
R4049	ERJ6GMYG682	M. RESISTOR CH 1/10W 6.8K	1		R6019	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R4050	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1		R6020	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R4051	ERJ6GMYG682	M. RESISTOR CH 1/10W 6.8K	1		R6021	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1	
R4052	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1		R6022, 23	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2	
R4053	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1		R6024	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R4054, 55	ERDS2TJ472	C. RESISTOR 1/4W 4.7K	2		R6025	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R4056	ERG1SJ122	M. RESISTOR 1W 1.2K	1		R6026	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R4057	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1		R6027-31	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	5	
R4058	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1		R6032	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	
R4059	ERJ6GMYG393	M. RESISTOR CH 1/10W 39K	1		R6033	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R4060	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1		R6034	ERJ6GMYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4061	ERJ6GMYG153	M. RESISTOR CH 1/10W 15K	1		R6035	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R4062	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1		R6036, 37	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	2	
R4063	ERG2SJ821	M. RESISTOR 2W 820	1		R6038, 39	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	2	
R4064	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1		R6040	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R4065, 66	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2		R6041	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R4067	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1		R6042, 43	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	2	
R4068	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1		R6044, 45	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	2	
R4069	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1		R6046	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
R4070	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1		R6047	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R4071	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1		R6050	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R4072	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1		R6051	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R4073, 74	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	2		R6052, 53	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2	
R4075	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1		R6054	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R4076	ERJ6GMYG562	M. RESISTOR CH 1/10W 5.6K	1		R6056, 57	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	2	
R4503	ERJ3RBD203	M. RESISTOR CH 1/16W 20K	1		R6059	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R4504	ERJ3GEYG224	M. RESISTOR CH 1/16W 220K	1		R6061	ERJ6GMYG183	M. RESISTOR CH 1/10W 18K	1	
R4508	ERJ3GEYG224	M. RESISTOR CH 1/16W 220K	1		R6062-66	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	5	
R4512	ERJ3RBD123	M. RESISTOR CH 1/16W 12K	1		R6701	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R4513	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R6702	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R4517, 18	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	2		R6703	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R4519, 20	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2		R6704	ERJ6GMYG562	M. RESISTOR CH 1/10W 5.6K	1	
R4522	ERJ3GEYK225	M. RESISTOR CH 1/16W 2.2M	1		R6705	ERJ6GMYG911	M. RESISTOR CH 1/10W .910	1	
R4528	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1		R6706, 07	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	2	
R4529	ERJ3GEYG562	M. RESISTOR CH 1/16W 5.6K	1		R6708	ERJ6GMYJ621	M. RESISTOR CH 1/10W 620	1	
R4530	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1		R6709	ERJ6GMYG471	M. RESISTOR CH 1/10W 470	1	
R4534	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R6710	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R4542	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1		R6711, 12	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	2	
R4562	ERJ3RBD912	M. RESISTOR CH 1/16W 9.1K	1		R6713	ERJ6GMYG273	M. RESISTOR CH 1/10W 27K	1	
R4563	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1		R6714	ERJ6GMYJ474	M. RESISTOR CH 1/10W 470K	1	
R4584	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R6715	ERJ6GMYG224	M. RESISTOR CH 1/10W 220K	1	
R4585	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R6716	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1	
R4586	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R6717, 18	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	2	
R4598	ERJ6RED124	M. RESISTOR CH 1/10W 120K	1		R6719	ERJ6GMYG182	M. RESISTOR CH 1/10W 1.8K	1	
R4599	ERJ6RED114	M. RESISTOR CH 1/10W 110K	1		R6723	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1	
R4601	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R6724-26	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	3	
R4603, 04	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2		R6727	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
R4605	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1		R6728	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R4606, 07	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2		R6729	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
R4608	ERDS2TJ103	C. RESISTOR 1/4W 10K	1		R6730	ERJ6GMYK225	M. RESISTOR CH 1/10W 2.2M	1	
R4621	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1		R6731	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R4623	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1		R6732, 33	ERJ6GMYJ105	M. RESISTOR CH 1/10W 1M	2	
R4624	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R6734	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	
R4690	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1		R6735	ERJ6GMYG224	M. RESISTOR CH 1/10W 220K	1	
R4695, 96	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2		R6736	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	
R4697	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1		R6737	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R4700	ERJ3GEYJ752	M. RESISTOR CH 1/16W 7.5K	1		R6738	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R4701	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R6739	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1	
R4702	ERJ3GEYJ752	M. RESISTOR CH 1/16W 7.5K	1		R6740-47	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	8	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6748, 49	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	2	
R6750	ERJ6GMJ223	M. RESISTOR CH 1/10W 22K	1	
R6751	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R6752	ERJ6GMJ223	M. RESISTOR CH 1/10W 22K	1	
R6753	ERJ6GMYG562	M. RESISTOR CH 1/10W 5.6K	1	
R6754	ERJ6GMYG153	M. RESISTOR CH 1/10W 15K	1	
R6755	ERJ6GMJ105	M. RESISTOR CH 1/10W 1M	1	
R6756	ERJ6GMYG271	M. RESISTOR CH 1/10W 270	1	
R6757	ERJ6GMYG273	M. RESISTOR CH 1/10W 27K	1	
R6758	ERJ6GMYG182	M. RESISTOR CH 1/10W 1.8K	1	
R6759	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R6760	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R6761	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	1	
R6762	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R6763	ERJ6GMYG472	M. RESISTOR CH 1/10W 4.7K	1	
R6765	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R6766-68	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	3	
R6769	ERJ6GMYG822	M. RESISTOR CH 1/10W 8.2K	1	
R6770	ERJ6GMYG104	M. RESISTOR CH 1/10W 100K	1	
R6771, 72	ERJ6GMJ221	M. RESISTOR CH 1/10W 220	2	
R6773	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R6774	ERJ6GMYG222	M. RESISTOR CH 1/10W 2.2K	1	
R6775	ERJ6GMYG122	M. RESISTOR CH 1/10W 1.2K	1	
R6776	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	1	
R6778	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R7301	ERJ3GEYG182	M. RESISTOR CH 1/16W 1.8K	1	
R7302	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R7303	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R7308	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1	
R7309, 10	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	2	
R7311	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R7312	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	1	
R7313, 14	ERJ3GEYG272	M. RESISTOR CH 1/16W 2.7K	2	
R7315	ERJ3GEYJ114	M. RESISTOR CH 1/16W 110K	1	
R7316	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R7317	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R7320	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R7321-23	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	3	
R7324	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R7325	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R7326	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R7327-29	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	3	
R7330	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R7332	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R7333	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R7334-36	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	3	
R7337	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R7339	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R7341-43	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	3	
R7346	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R7350	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R7351	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R7352-56	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R7357	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R7362	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R7366	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R7367	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R7368, 69	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R7370	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R7371	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R7376, 77	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R7378	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R7379	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R7381	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R7383	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R7602, 03	ERJ6GMJ683	M. RESISTOR CH 1/10W 68K	2	
R7605-07	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	3	
R7609	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
R7610	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1	
R7611	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R7612, 13	ERG2SJ331	M. RESISTOR 2W 330	2	
R7614	ERJ6GMYG561	M. RESISTOR CH 1/10W 560	1	
R7615	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R7616, 17	ERJ6GMYG151	M. RESISTOR CH 1/10W 150	2	
R7618	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7619	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
RX6701	EXBF9E103J	RESISTOR-RESISTOR	1	
S6001	VST0176	SWITCH	1	
S6002	VES0709	SWITCH	1	
T0703	EQVSEC071A	TRANSFORMER	1	
T0704	EQVSEC072A	TRANSFORMER	1	
T4001	EQQ7QF025P	TRANSFORMER	1	
T4002	EQQ7QF026P	TRANSFORMER	1	
△ TU7601	ENQ47259G1	TUNER	1	
VR0701	EVNCBAA00B24	V. RESISTOR 20K	1	
VR2001	EVNCYAA03B54	V. RESISTOR 50K	1	
VR4001	EVNCYAA03B54	V. RESISTOR 50K	1	
VR4501	EVMECSA00B53	V. RESISTOR 6.8K	1	
VR4509	EVMECSA00B53	V. RESISTOR 5K	1	
VR4550	EVMECSA00B14	V. RESISTOR 10K	1	
X0701	VLF1178	FILTER	1	
X0703	EFC5R5MW5	FILTER	1	
X0704	VLF1368	FILTER	1	
X6001	VXS0583	CRYSTAL OSCILLATOR	1	
X6701	VXS0875	CRYSTAL OSCILLATOR	1	
X6702	VXS0873	CRYSTAL OSCILLATOR	1	
X6703	VXS0066	CRYSTAL OSCILLATOR	1	
X7302	VXS0877	CRYSTAL OSCILLATOR	1	
X7303	EFOEC4004A4	CERAMIC OSCILLATOR	1	
ZA3001	VMC1217	EARTH SPRING ANGLE	1	
△ ZB6001, 02	VMD2329	PHOTO TRANSISTOR HOLDER	2	
ZB6003	VMD2328	REEL GUIDE	1	
ZB6004	VMD2330	LED HOLDER	1	
		MISCELLANEOUS		
	VMT0332	SPACER	1	FOR DECODER C. B. A.
	VSG3553	SHIELD COVER (MAIN)	1	FOR DECODER C. B. A.
	VSG3555	SHIELD COVER (BOOTTOM)	1	FOR DECODER C. B. A.
	VMT0784	SPACER	1	FOR DECODER C. B. A.
	VMP4471	TV DEMODULATOR ANGLE	1	FOR TV DEMODU. C. B. A.
■ VEP03D77A		INPUT/OUTPUT C. B. A.		(RTL)
C3903	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C3906	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C3907	ECEATCKA100	E. CAPACITOR 16V 10U	1	
C3908	ECUM1G105ZF	C. CAPACITOR CH 16V 1U	1	
C3909	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3910	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C3911	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C3912, 13	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C3914	ECEATAKA470	E. CAPACITOR 10V 47U	1	
C3915	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3916	ECUM1G105ZF	C. CAPACITOR CH 16V 1U	1	
C4901, 02	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C4903-12	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	10	
D3902	MA151WK	DIODE	1	
D3905, 06	1SS254	DIODE	2	
IC3901	MC14053BF	IC	1	
IC3902	MC14052BF	IC	1	
IC3903	MC14051BF	IC	1	
IC4901, 02	MC14052BF	IC	2	
IC4903	NJMA558M	IC	1	
JK3901, 02	VJS1470	JACK	2	
L3902-05	VLQ0599J680	COIL 68UH	4	
L4901, 02	VLQ0599J101	COIL 100UH	2	
L4903-08	VLQ0599J471	COIL 470UH	6	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
PS3901	VJS3042F016W	CONNECTOR (FEMALE) 16P	1		C559	EGUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
PS3902	VJS3042F013W	CONNECTOR (FEMALE) 13P	1		C560, 61	EGUM1H471JCN	C. CAPACITOR CH 50V 470P	2	
PS3903, 04	VJS3042B020W	CONNECTOR (FEMALE) 20P	2		C562, 63	EGUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
Q3903, 04	2SB709A	TRANSISTOR	2		C564	EGUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
Q3905, 06	2SD601A	TRANSISTOR	2		C565	EGUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
Q3907	2SB709A	TRANSISTOR	1		C566	EGUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
Q3910	MSD1328	TRANSISTOR	1		C567	EGUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
QR3902	MUN2211	TRANSISTOR-RESISTOR	1		C569	EGUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
QR3903	MUN2111	TRANSISTOR-RESISTOR	1		IC501	AN3336SB	IC	1	
QR3904	MUN2212	TRANSISTOR-RESISTOR	1		IC502	AN3370K	IC	1	
R3905	ERDS2TJ561	G. RESISTOR 1/4W 560	1		IC551	BA7743FS	IC	1	
R3907	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1		K501	VLP0145	COIL	1	
R3909	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1		K502	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R3911	ERDS2TJ121	G. RESISTOR 1/4W 120	1		K503, 04	VLP0145	COIL	2	
R3912	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	1		K505	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R3913	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1		K506	VLP0145	COIL	1	
R3914-22	ERJ6GEYG750	M. RESISTOR CH 1/10W 75	9		K552	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
R3923	ERJ6GEYG121	M. RESISTOR CH 1/10W 120	1		L501-03	VLQ0540K330	COIL 33UH	3	
R3924	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1		L504	VLQ0540J5R6	COIL 5.6UH	1	
R3925	ERJ6GEYJ111	M. RESISTOR CH 1/10W 110	1		L551, 52	VLQ0540K330	COIL 33UH	2	
R3926	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1		P501	VJS3537B020B	CONNECTOR (FEMALE) 20P	1	
R3927	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1		P502	VJS2603	CONNECTOR (FEMALE)	1	
R3928	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1		Q501	MSB709	TRANSISTOR	1	
R3929	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1		Q502	MSD601	TRANSISTOR	1	
R3930	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1		QR501	MUN2404	TRANSISTOR	1	
R3931	ERJ6GEYG121	M. RESISTOR CH 1/10W 120	1		R501	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	1	
R3932	ERJ6GEYG750	M. RESISTOR CH 1/10W 75	1		R502	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	1	
R3933	ERJ6GEYJ111	M. RESISTOR CH 1/10W 110	1		R503	ERJ6GMYG752	M. RESISTOR CH 1/10W 7.5K	1	
R3934-36	ERJ6GEYG750	M. RESISTOR CH 1/10W 75	3		R504	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	1	
R3937	ERJ6GEYF822	M. RESISTOR CH 1/10W 8.2K	1		R505	ERJ6GMYG182	M. RESISTOR CH 1/10W 1.8K	1	
R3938	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1		R506	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R4901, 02	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	2		R507	ERJ6GMYG391	M. RESISTOR CH 1/10W 390	1	
R4904, 05	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2		R508	ERJ6GMYG331	M. RESISTOR CH 1/10W 330	1	
R4906-13	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	8		R509-12	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	4	
R4917, 18	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2		R513	ERJ6GMYG103	M. RESISTOR CH 1/10W 10K	1	
R4926, 27	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2		R514	ERJ6GMYG274	M. RESISTOR CH 1/10W 270K	1	
S3901	VSS0513	SWITCH	1		R517	ERJ6GMYG100	M. RESISTOR CH 1/10W 10	1	
ZA3901	VEJ1730	I/O JACK PLATE	1		R518, 19	ERJ6GMYG101	M. RESISTOR CH 1/10W 100	2	
ZA3902-05	XTV3+8GFZ	SCREW	4		R520	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1	
■	VEP05176W	HEAD AMP C.B.A.		(RTL)	R521, 22	ERJ6GMYG822	M. RESISTOR CH 1/10W 8.2K	2	
G503	EGUM1C105ZFN	G. CAPACITOR CH 16V 1U	1		R523	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	1	
G505-08	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	4		R524	ERJ6RBD182	M. RESISTOR CH 1/10W 1.8K	1	
G509	EGUM1H332KBN	G. CAPACITOR CH 50V 3300P	1		R525	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
G510, 11	EGUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	2		R526	ERJ6GMYG133	M. RESISTOR CH 1/10W 13K	1	
G512	EGUM1H102KBN	G. CAPACITOR CH 50V 1000P	1		R551	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
G513	EGUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1		R552	ERJ6GMYG391	M. RESISTOR CH 1/10W 390	1	
G514	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		R553	ERJ6GMYG273	M. RESISTOR CH 1/10W 27K	1	
G515, 16	EGUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	2		R554	ERJ6GMYG243	M. RESISTOR CH 1/10W 24K	1	
G517, 18	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	2		R556	ERJ6GMYG333	M. RESISTOR CH 1/10W 33K	1	
G519, 20	EGUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	2		R557	ERJ6GMYG182	M. RESISTOR CH 1/10W 1.8K	1	
G521	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		R558	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1	
G523-25	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	3		R559, 60	ERJ6GMYG152	M. RESISTOR CH 1/10W 1.5K	2	
G526	VCEA0JAC221	E. CAPACITOR 6.3V 220U	1		R561	ERJ6GMYG332	M. RESISTOR CH 1/10W 3.3K	1	
G527	EGUM1H102KBN	G. CAPACITOR CH 50V 1000P	1		R562	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
G531	EGUM1H330JCN	G. CAPACITOR CH 50V 33P	1		R563	ERJ6RED100	M. RESISTOR CH 1/10W 10	1	
G532	EGUM1H560JCN	G. CAPACITOR CH 50V 56P	1		R564	ERJ6GMYG224	M. RESISTOR CH 1/10W 220K	1	
G533, 34	EGUM1H121JCN	G. CAPACITOR CH 50V 120P	2		R565	ERJ6GMYG473	M. RESISTOR CH 1/10W 47K	1	
G535	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		R566	ERJ6GMYG273	M. RESISTOR CH 1/10W 27K	1	
G536	EGUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1		R567	ERJ6GMYG153	M. RESISTOR CH 1/10W 15K	1	
G537	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1		R568	ERJ6GMYG271	M. RESISTOR CH 1/10W 270	1	
G538, 39	EGUM1H680JCN	G. CAPACITOR CH 50V 68P	2		R569	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
G540	ECEA1CKA470	E. CAPACITOR 16V 47U	1		R570	ERJ6GMYG102	M. RESISTOR CH 1/10W 1K	1	
G551	EGUM1H102KBN	G. CAPACITOR CH 50V 1000P	1				MISCELLANEOUS		
G552-54	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	3		VSC4580	H.A. SHIELD COVER (TOP)			
G555	ECEA0JPK221	E. CAPACITOR 6.3V 220U	1		VSC3478	H.A. SHIELD COVER (MAIN)			
G556, 57	EGUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	2		VSC4581	H.A. SHIELD COVER (BOTT.)			

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP07951B	TIMER C. B. A.		(RTL) NV-HS950B
C7501	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7502	ECEA1HKS100	E. CAPACITOR 50V 10U	1	
C7503	ECEA1AKS221	E. CAPACITOR 10V 220U	1	
C7504	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C7505	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1	
C7506	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C7507	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C7508	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7509	VCE0073	SUPER CAPACITOR	1	
C7510	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7512	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C7513	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C7514	ECEA0JKS470	E. CAPACITOR 6.3V 47U	1	
C7515, 16	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C7517, 18	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C7519, 20	ECUM1E473ZFN	C. CAPACITOR CH 25V 0.047U	2	
C7521	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C7522	ECEA0JKS220	E. CAPACITOR 6.3V 22U	1	
C7523	ECUX1H223KBN	C. CAPACITOR CH 50V 0.022U	1	
C7524, 25	ECEA1EKS4R7	E. CAPACITOR 25V 4.7U	2	
C7527, 28	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C7529-33	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	5	
D7501	MA4220-L	DIODE	1	
D7502	MA723-VT	DIODE	1	
D7503, 04	1SS254	DIODE	2	
D7505	MA723-VT	DIODE	1	
D7506, 07	1SS254	DIODE	2	
D7512	1SS254	DIODE	1	
D7515	1SS254	DIODE	1	
D7517-21	1SS254	DIODE	5	
D7523-31	1SS254	DIODE	9	
DP7501	VSL0467	DISPLAY TUBE	1	
IC7501	M37507V6AJ	IC	1	
IC7502	PST7023	IC	1	
IC7503	S80743AL	IC	1	
IC7504	RPM-6937	IC	1	
IC7505	BA6810F	IC	1	
K7501	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
K7503	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
K7506	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
P7501	VJS3673B025G	CONNECTOR (FEMALE) 25P	1	
P7502	VJP3405A009W	CONNECTOR (MALE) 9P	1	
PP7501	VJS3301	CONNECTOR (FEMALE)	1	
QR7501-04	MUN2113	TRANSISTOR-RESISTOR	4	
QR7505, 06	MUN2112	TRANSISTOR-RESISTOR	2	
QR7507-09	MUN2111	TRANSISTOR-RESISTOR	3	
R7501, 02	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R7503, 04	ERJ6GEYG132	M. RESISTOR CH 1/10W 1.3K	2	
R7505	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R7506	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R7507	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R7508	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	1	
R7509	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R7510	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R7513	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R7515	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R7516	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R7517	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R7518	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R7519	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R7520, 21	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	2	
R7522	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R7523-25	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	3	
R7526-28	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7529	ERDS2TJ470	C. RESISTOR 1/4W 47	1	
R7530, 31	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R7532	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	1	
R7533, 34	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
R7535	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R7536	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R7537	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
RX7501, 02	EXBF6E104J	RESISTOR-RESISTOR	2	
RX7503	EXBF8E104J	RESISTOR-RESISTOR	1	
S7501-12	EVQ11G09K	SWITCH	12	
S7513	VSQ0822	JOG/SHUTTLE ENCODER	1	
VG7501	ECRHA010A54R	V. CAPACITOR 50K	1	
VR4004	EVNYYAA03B53	V. RESISTOR 5K	1	
X7501	VSX0608	CRYSTAL OSCILLATOR	1	
X7502	VSX0094	CRYSTAL OSCILLATOR	1	
ZB7501	VJF1139	FIP HOLDER	1	
ZB7502	VMD2247	IR RECEIVER HOLDER	1	
ZB7503	VMD2035	JOG/SHUTTLE HOLDER	1	
	VEP07951A	TIMER C. B. A.		(RTL) NV-HS950EC
C7501	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7502	ECEA1HKS100	E. CAPACITOR 50V 10U	1	
C7503	ECEA1AKS221	E. CAPACITOR 10V 220U	1	
C7504	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C7505	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1	
C7506	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C7507	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C7508	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7509	VCE0073	SUPER CAPACITOR	1	
C7510	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7512	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C7513	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C7514	ECEA0JKS470	E. CAPACITOR 6.3V 47U	1	
C7515, 16	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C7517, 18	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C7519, 20	ECUM1E473ZFN	C. CAPACITOR CH 25V 0.047U	2	
C7521	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C7522	ECEA0JKS220	E. CAPACITOR 6.3V 22U	1	
C7523	ECUX1H223KBN	C. CAPACITOR CH 50V 0.022U	1	
C7524, 25	ECEA1EKS4R7	E. CAPACITOR 25V 4.7U	2	
C7527, 28	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C7529-33	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	5	
D7501	MA4220-L	DIODE	1	
D7502	MA723-VT	DIODE	1	
D7503, 04	1SS254	DIODE	2	
D7505	MA723-VT	DIODE	1	
D7506	1SS254	DIODE	1	
D7512	1SS254	DIODE	1	
D7515	1SS254	DIODE	1	
D7517-21	1SS254	DIODE	5	
D7523-31	1SS254	DIODE	9	
DP7501	VSL0467	DISPLAY TUBE	1	
IC7501	M37507V6AJ	IC	1	
IC7502	PST7023	IC	1	
IC7503	S80743AL	IC	1	
IC7504	RPM-6937	IC	1	
IC7505	BA6810F	IC	1	
K7501	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
K7503	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
K7506	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
P7501	VJS3673B025G	CONNECTOR (FEMALE) 25P	1	
P7502	VJP3405A009W	CONNECTOR (MALE) 9P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
PP7501	VJS3301	CONNECTOR (FEMALE)	1	
QR7501-04	MUN2113	TRANSISTOR-RESISTOR	4	
QR7505, 06	MUN2112	TRANSISTOR-RESISTOR	2	
QR7507-09	MUN2111	TRANSISTOR-RESISTOR	3	
R7501, 02	ERJ66EYOR00	M. RESISTOR CH 1/10W 0	2	
R7503, 04	ERJ66EYG132	M. RESISTOR CH 1/10W 1.3K	2	
R7505	ERJ66EYG103	M. RESISTOR CH 1/10W 10K	1	
R7506	ERJ66EYG101	M. RESISTOR CH 1/10W 100	1	
R7507	ERJ66EYG331	M. RESISTOR CH 1/10W 330	1	
R7508	ERJ66EYJ224	M. RESISTOR CH 1/10W 220K	1	
R7509	ERJ66EYG181	M. RESISTOR CH 1/10W 180	1	
R7510	ERJ66EYG221	M. RESISTOR CH 1/10W 220	1	
R7513	ERJ66EYG102	M. RESISTOR CH 1/10W 1K	1	
R7515	ERJ66EYG332	M. RESISTOR CH 1/10W 3.3K	1	
R7516	ERJ66EYG221	M. RESISTOR CH 1/10W 220	1	
R7517	ERJ66EYG332	M. RESISTOR CH 1/10W 3.3K	1	
R7518	ERJ66EYG221	M. RESISTOR CH 1/10W 220	1	
R7519	ERJ66EYG332	M. RESISTOR CH 1/10W 3.3K	1	
R7520, 21	ERJ66EYG221	M. RESISTOR CH 1/10W 220	2	
R7522	ERJ66EYG103	M. RESISTOR CH 1/10W 10K	1	
R7523-25	ERJ66EYG221	M. RESISTOR CH 1/10W 220	3	
R7526-28	ERJ66EYG332	M. RESISTOR CH 1/10W 3.3K	3	
R7529	ERDS2TJ470	C. RESISTOR 1/4W 47	1	
R7530, 31	ERJ66EYG223	M. RESISTOR CH 1/10W 22K	2	
R7532	ERJ66EYG272	M. RESISTOR CH 1/10W 2.7K	1	
R7533, 34	ERJ66EYF473	M. RESISTOR CH 1/10W 47K	2	
R7535	ERJ66EYG102	M. RESISTOR CH 1/10W 1K	1	
R7536	ERJ66EYG223	M. RESISTOR CH 1/10W 22K	1	
R7537	ERJ66EYG332	M. RESISTOR CH 1/10W 3.3K	1	
RX7501, 02	EXBF6E104J	RESISTOR-RESISTOR	2	
RX7503	EXBF8E104J	RESISTOR-RESISTOR	1	
S7501-12	EVQ11G09K	SWITCH	12	
S7513	VSQ0822	JOB/SHUTTLE ENCODER	1	
V67501	ECRHA010A54R	V. CAPACITOR 50K	1	
VR4004	EVNCA003B53	V. RESISTOR 5K	1	
X7501	VSX0608	CRYSTAL OSCILLATOR	1	
X7502	VSX0094	CRYSTAL OSCILLATOR	1	
ZB7501	VJF1139	FIP HOLDER	1	
ZB7502	VMD2247	IR RECEIVER HOLDER	1	
ZB7503	VMD2035	JOB/SHUTTLE HOLDER	1	
	VEP03D75B	DIGITAL C.B.A.		(RTL) NV-HS950B
G30002, 03	EGUX1H680JCV	G. CAPACITOR CH 50V 68P	2	
G30004, 05	EGUX1G104ZFV	G. CAPACITOR CH 16V 0.1U	2	
G30006	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30007, 08	EGUX1H100DCV	G. CAPACITOR CH 50V 10P	2	
G30009	ECEA1G6E470	E. CAPACITOR 16V 47U	1	
G30010	EGUX1G104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30011	EGUX1H181JCV	G. CAPACITOR CH 50V 180P	1	
G30012	EGUX1H151JCV	G. CAPACITOR CH 50V 150P	1	
G30013, 14	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	2	
G30015	EGUX1H221JCV	G. CAPACITOR CH 50V 220P	1	
G30016	EGUX1H331JCV	G. CAPACITOR CH 50V 330P	1	
G30017	EGUX1H330JCV	G. CAPACITOR CH 50V 33P	1	
G30019	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30020	ECEA1G6E470	E. CAPACITOR 16V 47U	1	
G30021	EGUX1G104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30022	EGUX1H560JCV	G. CAPACITOR CH 50V 56P	1	
G30023	EEVHB1H3R3	E. CAPACITOR 50V 3.3U	1	
G30024	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30025	EGUX1H391JCV	G. CAPACITOR CH 50V 390P	1	
G30026	EGUX1H080DCV	G. CAPACITOR CH 50V 8P	1	
G30027	EGUX1H560JCV	G. CAPACITOR CH 50V 56P	1	
G30028	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
G30029	EGUX1H681JCV	G. CAPACITOR CH 50V 680P	1	
G30030	EGUX1H330JCV	G. CAPACITOR CH 50V 33P	1	
G30031	EGUX1H180JCV	G. CAPACITOR CH 50V 18P	1	
G30032	EGUX1H220JCV	G. CAPACITOR CH 50V 22P	1	
G30033	EGUX1H151JCV	G. CAPACITOR CH 50V 150P	1	
G30034	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30035	EGUX1H100DCV	G. CAPACITOR CH 50V 10P	1	
G30036	EGUX1H220JCV	G. CAPACITOR CH 50V 22P	1	
G30037-41	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	5	
G30042	EGUX1H180JCV	G. CAPACITOR CH 50V 18P	1	
G30043	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30044	EGUX1H100DCV	G. CAPACITOR CH 50V 10P	1	
G30045	EGUX1H820JCV	G. CAPACITOR CH 50V 82P	1	
G30047	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30048	EGUX1H150JCV	G. CAPACITOR CH 50V 15P	1	
G30049-51	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	3	
G30052	EGUX1G104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30053	EGUX1H390JCV	G. CAPACITOR CH 50V 39P	1	
G30054	EGUX1H100DCV	G. CAPACITOR CH 50V 10P	1	
G30055	EGUX1H470JCV	G. CAPACITOR CH 50V 47P	1	
G30056	EGUX1H103KVB	G. CAPACITOR CH 50V 0.01U	1	
G30057	EGUX1A105ZVF	G. CAPACITOR CH 10V 1U	1	
G30058	ECEA1G6E470	E. CAPACITOR 16V 47U	1	
G30059	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30060	EEVHB1G100	E. CAPACITOR 16V 10U	1	
G30061	EEVHB1H3R3	E. CAPACITOR 50V 3.3U	1	
G30062	EGUM1E683KBN	G. CAPACITOR CH 16V 0.047U	1	
G30063	EGUM1E683KBN	G. CAPACITOR CH 25V 0.068U	1	
G30064	EGUX1G104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30065	ECEA1AGE101	E. CAPACITOR 10V 100U	1	
G30066	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30067	EQGB1H103KF	P. CAPACITOR 50V 0.01U	1	
G30068	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1	
G30069	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30070	EEVHB1G100	E. CAPACITOR 16V 10U	1	
G30071	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30072	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1	
G30073	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30074	EEVHB1G100	E. CAPACITOR 16V 10U	1	
G30075	EGUX1H1016CV	G. CAPACITOR CH 50V 100P	1	
G30076	EGUX1H1516CV	G. CAPACITOR CH 50V 150P	1	
G30077	EGUX1H4716CV	G. CAPACITOR CH 50V 470P	1	
G30078	EGUX1H080DCV	G. CAPACITOR CH 50V 8P	1	
G30079	EGUX1H470JCV	G. CAPACITOR CH 50V 47P	1	
G30080	EGUX1H330JCV	G. CAPACITOR CH 50V 33P	1	
G30083	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30085	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30087, 88	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	2	
G30089	EEVHB1H1R0	E. CAPACITOR 50V 1U	1	
G30090	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30091	ECEA1AGE101	E. CAPACITOR 10V 100U	1	
G30092	EGUX1G104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30093	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1	
G30094	EGUX1H471JCV	G. CAPACITOR CH 50V 470P	1	
G30096	EGUX1H390JCV	G. CAPACITOR CH 50V 39P	1	
G30097	EGUX1H102KVB	G. CAPACITOR CH 50V 1000P	1	
G30099	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30100, 01	EGUX1H221JCV	G. CAPACITOR CH 50V 220P	2	
G30102, 03	EGUM1E104KBN	G. CAPACITOR CH 25V 0.1U	2	
G30105	EQGV1H154JM	P. CAPACITOR 50V 0.15U	1	
G30106	EGUX1H471JCV	G. CAPACITOR CH 50V 470P	1	
G30107	EGUX1H820JCV	G. CAPACITOR CH 50V 82P	1	
G30108	ECEA1H6E2R2	E. CAPACITOR 50V 2.2U	1	
G30109	EGUX1H472KVB	G. CAPACITOR CH 50V 4700P	1	
G30110	EGUX1G104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30111	ECEA1AGE101	E. CAPACITOR 10V 100U	1	
G30112-14	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	3	
G30115	EGUX1H221JCV	G. CAPACITOR CH 50V 220P	1	
G30116	EGUX1H103ZVF	G. CAPACITOR CH 50V 0.01U	1	
G30117	EGUX1H470JCV	G. CAPACITOR CH 50V 47P	1	
G30118	EGUX1H120JCV	G. CAPACITOR CH 50V 12P	1	
G30119	EGUX1H270JCV	G. CAPACITOR CH 50V 27P	1	
G30128	EGUX1H470JCV	G. CAPACITOR CH 50V 47P	1	
G30130	EGUX1H101JCV	G. CAPACITOR CH 50V 100P	1	
G30131	EGUX1H270JCV	G. CAPACITOR CH 50V 27P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
G30132	ECUX1H470JGV	C. CAPACITOR CH 50V 47P	1	
G30134	ECUX1H470JGV	C. CAPACITOR CH 50V 47P	1	
G30135	ECUX1H0500GV	C. CAPACITOR CH 50V 5P	1	
G33002	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	1	
G33004	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33006	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	1	
G33008	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33010, 11	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	2	
G33012	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
G33013	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33014	EEVHB1G100	E. CAPACITOR 16V 10U	1	
G33015	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33016	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	1	
G33017	EEVHB1G100	E. CAPACITOR 16V 10U	1	
G33018	ECUX1H180JGV	C. CAPACITOR CH 50V 18P	1	
G33019	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33020, 21	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	2	
G33023, 24	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	2	
G33025	ECUM1G105ZFN	C. CAPACITOR CH 16V 1U	1	
G33026	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33027	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	1	
G33028	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33029	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	1	
G33030	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G33031	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	1	
G33032, 33	EEVHB1G100	E. CAPACITOR 16V 10U	2	
G33034	ECUX1H103ZV	C. CAPACITOR CH 50V 0.01U	1	
G33035-41	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	7	
G33042	ECUX1H103ZV	C. CAPACITOR CH 50V 0.01U	1	
G33043-49	ECUX1G104ZV	C. CAPACITOR CH 16V 0.1U	7	
G33050	ECUX1H562KBV	C. CAPACITOR CH 50V 5600P	1	
G33051	ECUX1H470JGV	C. CAPACITOR CH 50V 47P	1	
G33052	ECUX1H330JGV	C. CAPACITOR CH 50V 33P	1	
G33053	ECUX1H103ZV	C. CAPACITOR CH 50V 0.01U	1	
G33054	ECUX1H221JGV	C. CAPACITOR CH 50V 220P	1	
G33055	ECUX1H331JGV	C. CAPACITOR CH 50V 330P	1	
G35101	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
G35102	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1	
G35103	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
G35104	ECQP1H472JZ	P. CAPACITOR 50V 4700P	1	
G35105	ECUX1E223KBV	C. CAPACITOR CH 25V 0.022U	1	
G35106	ECUX1H103ZV	C. CAPACITOR CH 50V 0.01U	1	
G35107, 08	ECUX1G224ZV	C. CAPACITOR CH 16V 0.22U	2	
G35109	ECQB1H273JF	P. CAPACITOR 50V 0.027U	1	
D30001, 02	MA141K	DIODE	2	
D30003-05	MA141WK	DIODE	3	
D30006	MA141K	DIODE	1	
D30008, 09	MA141K	DIODE	2	
D30011	MA141K	DIODE	1	
D30012	MA141WK	DIODE	1	
D30013	MA141K	DIODE	1	
D30014	MA721	DIODE	1	
D30015	MA141K	DIODE	1	
D30016	MA141WK	DIODE	1	
D33001-03	MA745	DIODE	3	
D33004	MA141K	DIODE	1	
FL30001	VLF1141	FILTER	1	
FL30002	ELB4R060	FILTER	1	
FL30004	ELB3H016	FILTER	1	
FL33001	ELKE470FA	FILTER	1	
FL33002-04	ELKE103FA	FILTER	3	
FL33005	ELKE470FA	FILTER	1	
FL33006	ELKE103FA	FILTER	1	
FL33007	ELKE101FA	FILTER	1	
FL33008, 09	ELKE470FA	FILTER	2	
FL33010-12	ELKE103FA	FILTER	3	
FL33013	ELKE470FA	FILTER	1	
FL33015, 16	ELKE101FA	FILTER	2	
FL33017	ELKE103FA	FILTER	1	
FL33018	ELKE470FA	FILTER	1	
FL33019	ELKE101FA	FILTER	1	
FL33020	ELKE103FA	FILTER	1	
FL33021-23	ELKE470FA	FILTER	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
FL33024	ELKE103FA	FILTER	1	
FL33026	ELKE101FA	FILTER	1	
FL33027, 28	ELKE103FA	FILTER	2	
FL33029, 30	ELKE101FA	FILTER	2	
FL33031	ELKE103FA	FILTER	1	
FL33032	ELKE101FA	FILTER	1	
IC30001	M52083FP	IC	1	
IC30002	MC14066BF	IC	1	
IC30003	M52373BFP	IC	1	
IC30004	AN1358S	IC	1	
IC33001	ST24W01FM6TR	IC	1	
IC33002	SC371024CFU	IC	1	
IC33003	MN67152	IC	1	
IC33004	MN7A097B2C	IC	1	
IC33005	TC7SHU04FU	IC	1	
IC33006	F432536PH	IC	1	
IC33007	MN47V77S	IC	1	
IC33008	PST591DM	IC	1	
IC33009	TC7SHU04FU	IC	1	
IC33010	TC7S04F	IC	1	
IC33011	TC7S02F	IC	1	
IC33012	TC7S32F	IC	1	
IC33013	TC7S00FU	IC	1	
IC33014	TC7S02FU	IC	1	
IC33015	TC7S32FU	IC	1	
IC35101	TDA2595	IC	1	
IC35102	BA225F	IC	1	
K33001	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
L30001	VLQ0163J330	COIL	33UH	1
L30002	VLQ0163J151	COIL	150UH	1
L30003	ELESE820KA	INDUCTOR	82UH	1
L30004	ELESE181KA	INDUCTOR	180UH	1
L30005	VLQ0163J330	COIL	33UH	1
L30006	VLQ0163J181	COIL	180UH	1
L30007	VLQ0163J270	COIL	27UH	1
L30008	VLQ0163J101	COIL	100UH	1
L30009	VLQ0163J120	COIL	12UH	1
L30010	VLQ0163J6R8	COIL	6.8UH	1
L30011	VLQ0163J390	COIL	39UH	1
L30012	VLQ0163J150	COIL	15UH	1
L30013	VLQ0163J120	COIL	12UH	1
L30014	VLQ0163J390	COIL	39UH	1
L30015	VLQ0163J100	COIL	10UH	1
L30016	ELESE390KA	INDUCTOR	39UH	1
L30017	ELESE101KA	INDUCTOR	100UH	1
L30018	VLQ0163J820	COIL	82UH	1
L30019, 20	VLQ0163J560	COIL	56UH	2
L30022	ELESE101KA	INDUCTOR	100UH	1
L30024	ELESE221K	INDUCTOR	220UH	1
L30025, 26	ELESE681KA	INDUCTOR	680UH	2
L30027	ELESE331KA	INDUCTOR	330UH	1
L30028	ELESE390KA	INDUCTOR	39UH	1
L30029	ELESE101KA	INDUCTOR	100UH	1
L30030	VLQ0163J5R6	COIL	5.6UH	1
L30031	VLQ0163J3R9	COIL	3.9UH	1
L30032	VLQ0163J120	COIL	12UH	1
L30034	VLQ0163J330	COIL	33UH	1
L30036	VLQ0163J560	COIL	56UH	1
L30037	VLQ0163J330	COIL	33UH	1
L30038	VLQ0163J560	COIL	56UH	1
L30039	ELESE101KA	INDUCTOR	100UH	1
L30040	VLQ0163J101	COIL	100UH	1
LB33001, 02	VLP0192	COIL		2
LB33004, 05	VLP0196	COIL		2
LB33006	VLP0146	COIL		1
LB33007-10	VLP0196	COIL		4
P30001, 02	VJS3537A0176	CONNECTOR (FEMALE)	17P	2
P30003	VJS3537A0106	CONNECTOR (FEMALE)	10P	1
P33001, 02	VJS3794B017N	CONNECTOR (FEMALE)	17P	2
P33003	VJS3794B010N	CONNECTOR (FEMALE)	10P	1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
PP30001	VJP3043B007W	CONNECTOR (MALE)	7P	1	R30024	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
PS30001, 02	VJS3186B018	CONNECTOR (FEMALE)	18P	2	R30025	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
PS30003	VJS3042F007W	CONNECTOR (FEMALE)	7P	1	R30026	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
PS35101	VJS3043B007W	CONNECTOR (FEMALE)	7P	1	R30027, 28	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	2	
Q30001	2SB1218	TRANSISTOR		1	R30029	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
Q30002-07	2SD1819	TRANSISTOR		6	R30030	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
Q30008, 09	2SB1218	TRANSISTOR		2	R30031	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
Q30010, 11	2SC3930	TRANSISTOR		2	R30032	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
Q30012	2SD1819	TRANSISTOR		1	R30033	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
Q30013, 14	2SC3930	TRANSISTOR		2	R30034	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
Q30015	2SB1218	TRANSISTOR		1	R30035	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
Q30018	2SC3930	TRANSISTOR		1	R30036	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
Q30019	2SA1532	TRANSISTOR		1	R30037	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
Q30020, 21	2SB1218	TRANSISTOR		2	R30038	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
Q30023-25	2SD1819	TRANSISTOR		3	R30039	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
Q30028	2SC3930	TRANSISTOR		1	R30040-42	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3	
Q30029	2SD1819	TRANSISTOR		1	R30043	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
Q30030	XN1501	TRANSISTOR-RESISTOR		1	R30044	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
Q30031	2SA1532	TRANSISTOR		1	R30045	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
Q30032	2SD1819	TRANSISTOR		1	R30046	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
Q33002	2SD1819	TRANSISTOR		1	R30047	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
Q33003	2SA1532	TRANSISTOR		1	R30049	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
Q33004	2SB1218	TRANSISTOR		1	R30050	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
Q33006, 07	2SB1218	TRANSISTOR		2	R30051	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
Q35101	2SB1218	TRANSISTOR		1	R30052	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
QR30001	UN5211	TRANSISTOR-RESISTOR		1	R30053	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
QR30003	UN5211	TRANSISTOR-RESISTOR		1	R30054	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
QR30004, 05	DTG363EK	TRANSISTOR-RESISTOR		2	R30055-57	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
QR30006	UN511E	TRANSISTOR-RESISTOR		1	R30058	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
QR30007	UN5211	TRANSISTOR-RESISTOR		1	R30059, 60	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
QR30008	UN5213	TRANSISTOR-RESISTOR		1	R30063	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
QR30009	XN1213	TRANSISTOR-RESISTOR		1	R30064	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
QR30010	UN511D	TRANSISTOR-RESISTOR		1	R30065	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
QR30011	UN5113	TRANSISTOR-RESISTOR		1	R30066	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
QR30015, 16	XN1213	TRANSISTOR-RESISTOR		2	R30067	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
QR30017, 18	UN5213	TRANSISTOR-RESISTOR		2	R30068	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
QR30020	UN5113	TRANSISTOR-RESISTOR		1	R30069	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
QR30021	UN5115	TRANSISTOR-RESISTOR		1	R30070	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
QR30022	UN5213	TRANSISTOR-RESISTOR		1	R30071	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
QR30024	UN5211	TRANSISTOR-RESISTOR		1	R30072	ERJ3GEYJ822	M. RESISTOR CH 1/16W 8.2K	1	
QR30026	XN1213	TRANSISTOR-RESISTOR		1	R30074	ERJ3GEYK395	M. RESISTOR CH 1/16W 3.9K	1	
QR30029	UN511D	TRANSISTOR-RESISTOR		1	R30075	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
QR30031	UN5211	TRANSISTOR-RESISTOR		1	R30076	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
QR30032	UN5113	TRANSISTOR-RESISTOR		1	R30077	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
QR30033, 34	UN5213	TRANSISTOR-RESISTOR		2	R30078	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
QR33004	UN5213	TRANSISTOR-RESISTOR		1	R30079	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
QR33006	UN5113	TRANSISTOR-RESISTOR		1	R30080, 81	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
QR33007	UN5213	TRANSISTOR-RESISTOR		1	R30082	ERJ3RBD331	M. RESISTOR CH 1/16W 330	1	
QR33008	UN5211	TRANSISTOR-RESISTOR		1	R30083	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
QR33011-13	UN5213	TRANSISTOR-RESISTOR		3	R30084	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R30002, 03	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2		R30085	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	
R30004	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1		R30086	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
R30005	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R30087	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30006	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1		R30088	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30007	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1		R30089	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R30008	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30092	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R30009	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1		R30093	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R30010	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1		R30094, 95	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	2	
R30011	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R30096	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30012	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1		R30097	ERJ3GEYJ0R00	M. RESISTOR CH 1/16W 0	1	
R30013	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1		R30098	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R30014	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30099	ERJ3RBD361	M. RESISTOR CH 1/16W 360	1	
R30015	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R30100	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R30016	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1		R30101	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30017	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1		R30102	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R30018, 19	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2		R30103-05	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3	
R30020	ERJ3GEYJ0R00	M. RESISTOR CH 1/16W 0	1		R30106	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R30021	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1		R30107	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R30022	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		R30109	ERJ3GEYJ242	M. RESISTOR CH 1/16W 2.4K	1	
R30023	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R30113	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
					R30114	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
					R30115, 16	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
					R30117	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
					R30118	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
					R30119, 20	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R30121	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R30122	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R30123	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R30124, 25	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R30126	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R30127	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30131	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R30132	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30133	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R30134	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30135	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30137	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30139	ERJ3GEYG363	M. RESISTOR CH 1/16W 36K	1	
R30140	ERJ3GEYG153	M. RESISTOR CH 1/16W 15K	1	
R30141	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R30142	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30143, 44	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	2	
R30154	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R30156	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R30157	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R30158	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R30159	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30160	ERJ3GEYG821	M. RESISTOR CH 1/10W 820	1	
R30161	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R30162	ERJ3GEYJ106	M. RESISTOR CH 1/16W 10M	1	
R30163	ERJ3GEYG222	M. RESISTOR CH 1/16W 2.2K	1	
R33001	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33002	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R33003	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33004	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33005	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33006	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33007	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33008	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33009	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33010	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R33011	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33012	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33013	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R33014	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R33015	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33016	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33017	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33018	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33019	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33020	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33021	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33022	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R33023	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33024	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33025	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33026	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33027	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33028	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33029	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33030	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33031	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33032	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33033	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33034	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33035	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33038	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33039	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R33040	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33041	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R33042	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R33043	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33044	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33045	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33046	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33047	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33048	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33049	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33050	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R33051	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R33052	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33053	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33054	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33055	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33056	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33057	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33058	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33059	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33060	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33061	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R33064	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33065	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33066	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R33067	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33068	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33069	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33070	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33071	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R33072	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R33073	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33074	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33075	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33076	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33077	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33078	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33079, 80	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R33081	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33082	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33083	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33085	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R33086	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R33087	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R33088	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R33089	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R33090	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33093	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33094	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R33099, 00	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R33101	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R33102	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R33103	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R33104	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R33105	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R33107, 08	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R33109	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33110	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33111	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R33114	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33115	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33116	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R33117	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R33118, 19	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R33120	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33121	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R33124	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R33126, 27	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R35101	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R35102	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R35103	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R35104	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R35105	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R35106	ERJ3GEYG123	M. RESISTOR CH 1/16W 12K	1	
R35107	ERJ3GEYJ124	M. RESISTOR CH 1/16W 120K	1	
R35108	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R35109	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R35110	ERJ3GEYG124	M. RESISTOR CH 1/16W 120K	1	
VR30001-03	EVMEGSA00B23	V. RESISTOR	2K	3
VR30004, 05	EVMEGSA00B52	V. RESISTOR	500	2
VR30006	EVMEGSA00B14	V. RESISTOR	10K	1
VR30007	EVMTJGA00B24	V. RESISTOR	20K	1
VR30008	EVMTJGA00B14	V. RESISTOR	10K	1
VR30009	EVMEGSA00B24	V. RESISTOR	20K	1
VR30010	EVMEGSA00B13	V. RESISTOR	1K	1
VR30011	EVMEGSA00B14	V. RESISTOR	10K	1

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR30012	EVM7JGA00B14	V. RESISTOR 10K	1		G30072	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1	
VR35101	EVM7JGA00B24	V. RESISTOR 20K	1		G30073	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
X30001	VSX0874	CRYSTAL OSCILLATOR	1		G30074	EEVHB1C100	E. CAPACITOR 16V 10U	1	
ZA33001	VXA5920	Y/C SHIELD COVER UNIT	1		G30075	ECUX1H101GCV	G. CAPACITOR CH 50V 100P	1	
ZA33002	VSC4255	Y/C SHIELD COVER (TOP)	1		G30076	ECUX1H151GCV	G. CAPACITOR CH 50V 150P	1	
		MISCELLANEOUS			G30077	ECUX1H471GCV	G. CAPACITOR CH 50V 470P	1	
	VWJ1063	FLAT CARD CABLE	2	P33001-P30001	G30078	ECUX1H0800GCV	G. CAPACITOR CH 50V 8P	1	
				P33002-P30002	G30079	ECUX1H390JGV	G. CAPACITOR CH 50V 39P	1	
	VWJ1065	FLAT CARD CABLE	1	P33003-P30003	G30080	ECUX1H330JGV	G. CAPACITOR CH 50V 33P	1	
	XTV3+8J	SCREW	5		G30083	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
					G30085	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
	■ VEP03D75A	DIGITAL C.B.A.		(RTL) NV-HS950EC	G30087, 88	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	2	
G30002, 03	ECUX1H680JGV	G. CAPACITOR CH 50V 68P	2		G30089	EEVHB1H1R0	E. CAPACITOR 50V 1U	1	
G30004, 05	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	2		G30090	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
G30006	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G30091	ECEA1AGE101	E. CAPACITOR 10V 100U	1	
G30007, 08	ECUX1H1000GCV	G. CAPACITOR CH 50V 10P	2		G30092	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30009	ECEA1CGE470	E. CAPACITOR 16V 47U	1		G30093	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1	
G30010	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1		G30094	ECUX1H471JGV	G. CAPACITOR CH 50V 470P	1	
G30011	ECUX1H181JGV	G. CAPACITOR CH 50V 180P	1		G30096	ECUX1H390JGV	G. CAPACITOR CH 50V 39P	1	
G30012	ECUX1H151JGV	G. CAPACITOR CH 50V 150P	1		G30097	ECUX1H102KBV	G. CAPACITOR CH 50V 1000P	1	
G30013, 14	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	2		G30099	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
G30015	ECUX1H221JGV	G. CAPACITOR CH 50V 220P	1		G30100, 01	ECUX1H221JGV	G. CAPACITOR CH 50V 220P	2	
G30016	ECUX1H331JGV	G. CAPACITOR CH 50V 330P	1		G30102, 03	ECUM1E104KBN	G. CAPACITOR CH 25V 0.1U	2	
G30017	ECUX1H330JGV	G. CAPACITOR CH 50V 33P	1		G30104	ECUX1H681JGV	G. CAPACITOR CH 50V 680P	1	
G30019	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G30105	ECQV1H154JM	P. CAPACITOR 50V 0.15U	1	
G30020	ECEA1CGE470	E. CAPACITOR 16V 47U	1		G30106	ECUX1H471JGV	G. CAPACITOR CH 50V 470P	1	
G30021	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1		G30107	ECUX1H820JGV	G. CAPACITOR CH 50V 82P	1	
G30022	ECUX1H560JGV	G. CAPACITOR CH 50V 56P	1		G30108	ECEA1HGE2R2	E. CAPACITOR 50V 2.2U	1	
G30023	EEVHB1H3R3	E. CAPACITOR 50V 3.3U	1		G30109	ECUX1H472KBV	G. CAPACITOR CH 50V 4700P	1	
G30024	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G30110	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30025	ECUX1H391JGV	G. CAPACITOR CH 50V 390P	1		G30111	ECEA1AGE101	E. CAPACITOR 10V 100U	1	
G30026	ECUX1H0800GCV	G. CAPACITOR CH 50V 8P	1		G30112-14	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	3	
G30027	ECUX1H560JGV	G. CAPACITOR CH 50V 56P	1		G30115	ECUX1H221JGV	G. CAPACITOR CH 50V 220P	1	
G30028	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G30116	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
G30029	ECUX1H681JGV	G. CAPACITOR CH 50V 680P	1		G30117	ECUX1H470JGV	G. CAPACITOR CH 50V 47P	1	
G30030	ECUX1H330JGV	G. CAPACITOR CH 50V 33P	1		G30118	ECUX1H120JGV	G. CAPACITOR CH 50V 12P	1	
G30031	ECUX1H180JGV	G. CAPACITOR CH 50V 18P	1		G30119	ECUX1H270JGV	G. CAPACITOR CH 50V 27P	1	
G30032	ECUX1H220JGV	G. CAPACITOR CH 50V 22P	1		G30128	ECUX1H470JGV	G. CAPACITOR CH 50V 47P	1	
G30033	ECUX1H151JGV	G. CAPACITOR CH 50V 150P	1		G30130	ECUX1H101JGV	G. CAPACITOR CH 50V 100P	1	
G30034	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G30131	ECUX1H270JGV	G. CAPACITOR CH 50V 27P	1	
G30035	ECUX1H1000GCV	G. CAPACITOR CH 50V 10P	1		G30132	ECUX1H470JGV	G. CAPACITOR CH 50V 47P	1	
G30036	ECUX1H220JGV	G. CAPACITOR CH 50V 22P	1		G30134	ECUX1H470JGV	G. CAPACITOR CH 50V 47P	1	
G30037-41	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	5		G30135	ECUX1H0500GCV	G. CAPACITOR CH 50V 5P	1	
G30042	ECUX1H180JGV	G. CAPACITOR CH 50V 18P	1		G33002	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30043	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G33004	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30044	ECUX1H1000GCV	G. CAPACITOR CH 50V 10P	1		G33006	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30045	ECUX1H820JGV	G. CAPACITOR CH 50V 82P	1		G33008	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30047	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G33010, 11	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	2	
G30048	ECUX1H150JGV	G. CAPACITOR CH 50V 15P	1		G33012	ECUX1H222KBV	G. CAPACITOR CH 50V 2200P	1	
G30049-51	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	3		G33013	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30052	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1		G33014	EEVHB1C100	E. CAPACITOR 16V 10U	1	
G30053	ECUX1H390JGV	G. CAPACITOR CH 50V 39P	1		G33015	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30054	ECUX1H1000GCV	G. CAPACITOR CH 50V 10P	1		G33016	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30055	ECUX1H470JGV	G. CAPACITOR CH 50V 47P	1		G33017	EEVHB1C100	E. CAPACITOR 16V 10U	1	
G30056	ECUX1H103KBV	G. CAPACITOR CH 50V 0.01U	1		G33018	ECUX1H180JGV	G. CAPACITOR CH 50V 18P	1	
G30057	ECUX1A105ZFV	G. CAPACITOR CH 10V 1U	1		G33019	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30058	ECEA1CGE470	E. CAPACITOR 16V 47U	1		G33020, 21	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	2	
G30059	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G33023, 24	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	2	
G30060	EEVHB1C100	E. CAPACITOR 16V 10U	1		G33025	ECUM1C105ZFN	G. CAPACITOR CH 16V 1U	1	
G30061	EEVHB1H3R3	E. CAPACITOR 50V 3.3U	1		G33026	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30062	ECUM1C184KBN	G. CAPACITOR CH 16V 0.18U	1		G33027	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30063	ECUM1E683KBN	G. CAPACITOR CH 25V 0.068U	1		G33028	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30064	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1		G33029	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30065	ECEA1AGE101	E. CAPACITOR 10V 100U	1		G33030	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
G30066	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G33031	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	1	
G30067	ECQB1H103KF	P. CAPACITOR 50V 0.01U	1		G33032, 33	EEVHB1C100	E. CAPACITOR 16V 10U	2	
G30068	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1		G33034	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
G30069	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G33035-41	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	7	
G30070	EEVHB1C100	E. CAPACITOR 16V 10U	1		G33042	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
G30071	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1		G33043-49	ECUX1C104ZFV	G. CAPACITOR CH 16V 0.1U	7	
					G33050	ECUX1H562KBV	G. CAPACITOR CH 50V 5600P	1	
					G33051	ECUX1H470JGV	G. CAPACITOR CH 50V 47P	1	
					G33052	ECUX1H330JGV	G. CAPACITOR CH 50V 33P	1	
					G33053	ECUX1H103ZFV	G. CAPACITOR CH 50V 0.01U	1	
					G33054	ECUX1H221JGV	G. CAPACITOR CH 50V 220P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C33055	EGUX1H331JGV	C. CAPACITOR CH 50V 330P	1	
C35101	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C35102	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1	
C35103	EGUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C35104	EQQP1H472JZ	P. CAPACITOR 50V 4700P	1	
C35105	EGUX1E223KBV	C. CAPACITOR CH 25V 0.022U	1	
C35106	EGUX1H103ZV	C. CAPACITOR CH 50V 0.01U	1	
C35107, 08	EGUX1G224ZV	C. CAPACITOR CH 16V 0.22U	2	
C35109	EQQB1H273JF	P. CAPACITOR 50V 0.027U	1	
D30001, 02	MA141K	DIODE	2	
D30003-05	MA141WK	DIODE	3	
D30006	MA141K	DIODE	1	
D30008, 09	MA141K	DIODE	2	
D30011	MA141K	DIODE	1	
D30012	MA141WK	DIODE	1	
D30013	MA141K	DIODE	1	
D30014	MA721	DIODE	1	
D30015	MA141K	DIODE	1	
D30016	MA141WK	DIODE	1	
D33001-03	MA745	DIODE	3	
D33004	MA141K	DIODE	1	
FL30001	VLF1141	FILTER	1	
FL30002	ELB4R060	FILTER	1	
FL30004	ELB3H016	FILTER	1	
FL33001	ELKE470FA	FILTER	1	
FL33002-04	ELKE103FA	FILTER	3	
FL33005	ELKE470FA	FILTER	1	
FL33006	ELKE103FA	FILTER	1	
FL33007	ELKE101FA	FILTER	1	
FL33008, 09	ELKE470FA	FILTER	2	
FL33010-12	ELKE103FA	FILTER	3	
FL33013	ELKE470FA	FILTER	1	
FL33015, 16	ELKE101FA	FILTER	2	
FL33017	ELKE103FA	FILTER	1	
FL33018	ELKE470FA	FILTER	1	
FL33019	ELKE101FA	FILTER	1	
FL33020	ELKE103FA	FILTER	1	
FL33021-23	ELKE470FA	FILTER	3	
FL33024, 25	ELKE103FA	FILTER	2	
FL33026	ELKE101FA	FILTER	1	
FL33027, 28	ELKE103FA	FILTER	2	
FL33029, 30	ELKE101FA	FILTER	2	
FL33031	ELKE103FA	FILTER	1	
FL33032	ELKE101FA	FILTER	1	
IC30001	M52083FP	IC	1	
IC30002	MC14066BF	IC	1	
IC30003	M52373BFP	IC	1	
IC30004	AN1358S	IC	1	
IC33001	ST24W01FM6TR	IC	1	
IC33002	SC371024CFU	IC	1	
IC33003	MN67152	IC	1	
IC33004	MN7A097B2C	IC	1	
IC33005	TC7SHU04FU	IC	1	
IC33006	F432536PH	IC	1	
IC33007	MN47V77S	IC	1	
IC33008	PST591DM	IC	1	
IC33009	TC7SHU04FU	IC	1	
IC33010	TC7S04F	IC	1	
IC33011	TC7S02F	IC	1	
IC33012	TC7S32F	IC	1	
IC33013	TC7S00FU	IC	1	
IC33014	TC7S02FU	IC	1	
IC33015	TC7S32FU	IC	1	
IC35101	TDA2595	IC	1	
IC35102	BA225F	IC	1	
K33001	ERJ3GEYOR00	M. RESISTOR CH 1/16W	0	1
L30001	VLQ0163J330	COIL 33UH	1	
L30002	VLQ0163J151	COIL 15UH	1	
L30003	ELESE820KA	INDUCTOR 82UH	1	
L30004	ELESE181KA	INDUCTOR 18UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L30005	VLQ0163J330	COIL 33UH	1	
L30006	VLQ0163J181	COIL 18UH	1	
L30007	VLQ0163J270	COIL 27UH	1	
L30008	VLQ0163J101	COIL 10UH	1	
L30009	VLQ0163J120	COIL 12UH	1	
L30010	VLQ0163J6R8	COIL 6.8UH	1	
L30011	VLQ0163J390	COIL 39UH	1	
L30012	VLQ0163J150	COIL 15UH	1	
L30013	VLQ0163J120	COIL 12UH	1	
L30014	VLQ0163J390	COIL 39UH	1	
L30015	VLQ0163J100	COIL 10UH	1	
L30016	ELESE390KA	INDUCTOR 39UH	1	
L30017	ELESE101KA	INDUCTOR 100UH	1	
L30018	VLQ0163J820	COIL 82UH	1	
L30019, 20	VLQ0163J560	COIL 56UH	2	
L30022	ELESE101KA	INDUCTOR 100UH	1	
L30024	ELESE221K	INDUCTOR 220UH	1	
L30025, 26	ELESE681KA	INDUCTOR 680UH	2	
L30027	ELESE331KA	INDUCTOR 330UH	1	
L30028	ELESE390KA	INDUCTOR 39UH	1	
L30029	ELESE101KA	INDUCTOR 100UH	1	
L30030	VLQ0163J5R6	COIL 5.6UH	1	
L30031	VLQ0163J3R9	COIL 3.9UH	1	
L30032	VLQ0163J120	COIL 12UH	1	
L30034	VLQ0163J330	COIL 33UH	1	
L30036	VLQ0163J560	COIL 56UH	1	
L30037	VLQ0163J330	COIL 33UH	1	
L30038	VLQ0163J560	COIL 56UH	1	
L30039	ELESE101KA	INDUCTOR 100UH	1	
L30040	VLQ0163J101	COIL 10UH	1	
LB33001, 02	VLP0192	COIL	2	
LB33004, 05	VLP0196	COIL	2	
LB33006	VLP0146	COIL	1	
LB33007-10	VLP0196	COIL	4	
P30001, 02	VJS3537A017G	CONNECTOR (FEMALE) 17P	2	
P30003	VJS3537A010G	CONNECTOR (FEMALE) 10P	1	
P33001, 02	VJS3794B017N	CONNECTOR (FEMALE) 17P	2	
P33003	VJS3794B010N	CONNECTOR (FEMALE) 10P	1	
PP30001	VJP3043G007W	CONNECTOR (MALE) 7P	1	
PS30001, 02	VJS3186B018	CONNECTOR (FEMALE) 18P	2	
PS30003	VJS3042F007W	CONNECTOR (FEMALE) 7P	1	
PS35101	VJS3043B007W	CONNECTOR (FEMALE) 7P	1	
Q30001	2SB1218	TRANSISTOR	1	
Q30002-07	2SD1819	TRANSISTOR	6	
Q30008, 09	2SB1218	TRANSISTOR	2	
Q30010, 11	2SC3930	TRANSISTOR	2	
Q30012	2SD1819	TRANSISTOR	1	
Q30013, 14	2SC3930	TRANSISTOR	2	
Q30015	2SB1218	TRANSISTOR	1	
Q30018	2SC3930	TRANSISTOR	1	
Q30019	2SA1532	TRANSISTOR	1	
Q30020, 21	2SB1218	TRANSISTOR	2	
Q30023-25	2SD1819	TRANSISTOR	3	
Q30028	2SC3930	TRANSISTOR	1	
Q30029	2SD1819	TRANSISTOR	1	
Q30030	XN1501	TRANSISTOR-RESISTOR	1	
Q30031	2SA1532	TRANSISTOR	1	
Q30032	2SD1819	TRANSISTOR	1	
Q33002	2SD1819	TRANSISTOR	1	
Q33003	2SA1532	TRANSISTOR	1	
Q33004	2SB1218	TRANSISTOR	1	
Q33006, 07	2SB1218	TRANSISTOR	2	
Q35101	2SB1218	TRANSISTOR	1	
QR30001	UN5211	TRANSISTOR-RESISTOR	1	
QR30002	UN5213	TRANSISTOR-RESISTOR	1	
QR30003	UN5211	TRANSISTOR-RESISTOR	1	
QR30004, 05	DTC363EK	TRANSISTOR-RESISTOR	2	
QR30006	UN511E	TRANSISTOR-RESISTOR	1	
QR30007	UN5211	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR30008	UN5213	TRANSISTOR-RESISTOR	1		R30063	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
QR30009	XN1213	TRANSISTOR-RESISTOR	1		R30064	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
QR30010	UN511D	TRANSISTOR-RESISTOR	1		R30065	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
QR30011	UN5113	TRANSISTOR-RESISTOR	1		R30066	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
QR30012	UN5213	TRANSISTOR-RESISTOR	1		R30067	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
QR30013	UN5112	TRANSISTOR-RESISTOR	1		R30068	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
QR30015, 16	XN1213	TRANSISTOR-RESISTOR	2		R30069	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
QR30017-19	UN5213	TRANSISTOR-RESISTOR	3		R30070	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
QR30020	UN5113	TRANSISTOR-RESISTOR	1		R30071	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
QR30021	UN5115	TRANSISTOR-RESISTOR	1		R30072	ERJ3GEYJ822	M. RESISTOR CH 1/16W 8.2K	1	
QR30022	UN5213	TRANSISTOR-RESISTOR	1		R30074	ERJ3GEYK395	M. RESISTOR CH 1/16W 3.9W	1	
QR30024	UN5211	TRANSISTOR-RESISTOR	1		R30075	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
QR30026	XN1213	TRANSISTOR-RESISTOR	1		R30076	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
QR30029	UN511D	TRANSISTOR-RESISTOR	1		R30077	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
QR30031	UN5211	TRANSISTOR-RESISTOR	1		R30078	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
QR30032	UN5113	TRANSISTOR-RESISTOR	1		R30079	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
QR30033, 34	UN5213	TRANSISTOR-RESISTOR	2		R30080, 81	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
QR30033	UN5212	TRANSISTOR-RESISTOR	1		R30082	ERJ3RBD331	M. RESISTOR CH 1/16W 330	1	
QR30034	UN5213	TRANSISTOR-RESISTOR	1		R30083	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
QR30035, 06	UN5113	TRANSISTOR-RESISTOR	2		R30084	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
QR30037	UN5213	TRANSISTOR-RESISTOR	1		R30085	ERJ3RBD431	M. RESISTOR CH 1/16W 430	1	
QR30038	UN5211	TRANSISTOR-RESISTOR	1		R30086	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
QR30039	UN5113	TRANSISTOR-RESISTOR	1		R30087	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
QR30010-13	UN5213	TRANSISTOR-RESISTOR	4		R30088	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
					R30089	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R30002, 03	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2		R30092	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R30004	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1		R30093	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R30005	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R30094, 95	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	2	
R30006	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1		R30096	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30007	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1		R30097	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R30008	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30098	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1	
R30009	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1		R30099	ERJ3RBD361	M. RESISTOR CH 1/16W 360	1	
R30010	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1		R30100	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R30011	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R30101	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30012	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1		R30102	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R30013	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1		R30103-05	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3	
R30014	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30106	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R30015	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R30107	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R30016	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1		R30108	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R30017	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1		R30109	ERJ3GEYJ242	M. RESISTOR CH 1/16W 2.4K	1	
R30018, 19	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2		R30113	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R30020	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R30114	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30021	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1		R30115, 16	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	2	
R30022	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		R30117	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R30023	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R30118	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1	
R30024	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R30119, 20	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R30025	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1		R30121	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R30026	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30122	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R30027, 28	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	2		R30123	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R30029	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R30124, 25	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R30030	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1		R30126	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R30031	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30127	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30032	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1		R30131	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R30033	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R30132	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30034	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1		R30133	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R30035	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R30134	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30036	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1		R30135	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30037	ERJ3GEYJ471	M. RESISTOR CH 1/16W 470	1		R30137	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30038	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1		R30139	ERJ3GEYJ363	M. RESISTOR CH 1/16W 36K	1	
R30039	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1		R30140	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R30040-42	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	3		R30141	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R30043	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1		R30142	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30044	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1		R30143, 44	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	2	
R30045	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1		R30154	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R30046	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1		R30156	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R30047	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1		R30157	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R30049	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30158	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R30050	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1		R30159	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30051	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1		R30160	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820	1	
R30052	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30161	ERJ3GEYJ332	M. RESISTOR CH 1/16W 3.3K	1	
R30053	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1		R30162	ERJ3GEYJ106	M. RESISTOR CH 1/16W 10W	1	
R30054	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1		R30163	ERJ3GEYJ152	M. RESISTOR CH 1/16W 1.5K	1	
R30055-57	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3		R33001	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R30058	ERJ3GEYJ472	M. RESISTOR CH 1/16W 4.7K	1		R33002	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30059, 60	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2		R33003	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R33004	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R33082	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R33005	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33083	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33006	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33085	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R33007	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R33086	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R33008	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33087	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R33009	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33088	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R33010	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1		R33089	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R33011	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33090	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33012	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33093	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R33013	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1		R33094	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R33014	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		R33095	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R33015	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33099.00	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R33016	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R33101	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R33017	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33102	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R33018	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33103	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R33019	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R33104	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R33020	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33105	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R33021	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33106	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R33022	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1		R33107.08	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R33023	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33109	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33024	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		R33110	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33025	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33111	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R33026	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R33114	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33027	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33115	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R33028	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33116	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R33029	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R33117	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R33030	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33118.19	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R33031	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33120	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R33032	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R33121	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R33033	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R33123	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R33034	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R33124	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R33035	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		R33126.27	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R33038	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R35101	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R33039	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1		R35102	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R33040	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R35103	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33041	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1		R35104	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R33042	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1		R35105	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R33043	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R35106	ERJ3GEYG123	M. RESISTOR CH 1/16W 12K	1	
R33044	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R35107	ERJ3GEYJ124	M. RESISTOR CH 1/16W 120K	1	
R33045	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R35108	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R33046	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R35109	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R33047	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R35110	ERJ3GEYG124	M. RESISTOR CH 1/16W 120K	1	
R33048	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1						
R33049	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		VR30001-03	EVMEGSA00B23	V. RESISTOR 2K	3	
R33050	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		VR30004.05	EVMEGSA00B52	V. RESISTOR 500	2	
R33051	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		VR30006	EVMEGSA00B14	V. RESISTOR 10K	1	
R33052	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		VR30007	EVW7JGA00B24	V. RESISTOR 20K	1	
R33053	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		VR30008	EVW7JGA00B14	V. RESISTOR 10K	1	
R33054	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		VR30009	EVMEGSA00B24	V. RESISTOR 20K	1	
R33055	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		VR30010	EVMEGSA00B13	V. RESISTOR 1K	1	
R33056	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		VR30011	EVMEGSA00B14	V. RESISTOR 10K	1	
R33057	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		VR30012	EVW7JGA00B14	V. RESISTOR 10K	1	
R33058	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		VR35101	EVW7JGA00B24	V. RESISTOR 20K	1	
R33059	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1						
R33060	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		X30001	VXS0874	CRYSTAL OSCILLATOR	1	
R33061	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1						
R33062	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		ZA33001	VXA5920	Y/C SHIELD COVER UNIT	1	
R33063	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		ZA33002	VSC4255	Y/C SHIELD COVER (TOP)	1	
R33064	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1						
R33065	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1				MISCELLANEOUS		
R33066	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1			VWJ1063	FLAT CARD CABLE	2	P33001-P30001
R33067	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1						P33002-P30002
R33068	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1			VWJ1065	FLAT CARD CABLE	1	P33003-P30003
R33069	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1			XTV3+8J	SCREW	5	
R33070	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1						
R33071	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1						
R33072	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1			■ VEP06B84A	VR C. B. A.		(RTL)
R33073	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1						
R33074	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1						
R33075	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		C6501.02	ECUM1H101JCN	G. CAPACITOR CH 50V 100P	2	
R33076	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		C6503.04	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	2	
R33077	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		C6505	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1	
R33078	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		C6506	ECUX1H223KBN	G. CAPACITOR CH 50V 0.022U	1	
R33079.80	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2		C6507	ECUM1H104ZFN	G. CAPACITOR CH 50V 0.1U	1	
R33081	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		C6508	ECUM1H103ZFN	G. CAPACITOR CH 50V 0.01U	1	
					C6509	ECUX1H223KBN	G. CAPACITOR CH 50V 0.022U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
G6512	ECEA1CKA330	E. CAPACITOR 16V 33U	1		■	VEP01804A	SUB POWER C.B.A.		(RTL)
G6513	ECEA1EKS3R3	E. CAPACITOR 25V 3.3U	1		G1201	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
G6514	ECUM1H472KBN	G. CAPACITOR CH 50V 4700P	1		G1202	ECEA1AKA470	E. CAPACITOR 10V 47U	1	
G6515	ECEA1AKA330	E. CAPACITOR 10V 33U	1		G1203	ECKF1H103ZF	G. CAPACITOR 50V 0.01U	1	
D6502, 03	HLMF-D200	DIODE	2		G1204	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
D6504	HLMF-D300	DIODE	1		D1201	1SS254	DIODE	1	
D6505	HLMF-D200	DIODE	1		IC1201	SI-3033C	IC	1	
D6511	HLMF-D500	DIODE	1		L1201	VLQ0599JR12T	INDUCTOR	1	
IC6501	VCR0172	IC	1		P1201	VJP1231T	CONNECTOR (MALE) 4P	1	
J4801	VJJ0329	JACK	1		R1201	ERDS2TJ151	G. RESISTOR 1/4W 150	1	
J4802	VJJ0308	JACK	1		R1202	ERDS2TJ682	G. RESISTOR 1/4W 6.8K	1	
J4803	VJJ0242	JACK	1		R1203	ERDS2TJ103	G. RESISTOR 1/4W 10K	1	
J6501	VEJ1341	JACK	1						
L6501, 02	VLQ0599J101	COIL 100UH	2		▲	■	VEP01639A	POWER C.B.A.	(RTL)
L6503, 04	VLQ0599J221	COIL 220UH	2		▲	G1101-03	ECKMWS102MEF	G. CAPACITOR 1000P	3
L6505, 06	VLQ0599J471	COIL 470UH	2		▲	G1105, 06	ECQU2A154MVA	P. CAPACITOR 0.15U	2
LB4801	VLP0145	COIL	1		G1107	EGEC2GG121HZ	E. CAPACITOR 400V 120U	1	
P6501	VJS3405A009A	CONNECTOR (FEMALE) 9P	1		G1108	ECGZ3A121KGE	G. CAPACITOR 1KV 120	1	
P6502	VJS3673B023G	CONNECTOR (FEMALE) 23P	1		G1109	ECKD2H103PU	G. CAPACITOR 500V 0.01U	1	
P6503	VJS3537B011G	CONNECTOR (FEMALE) 11P	1		G1110	ECA06XLV331	E. CAPACITOR 4V 330U	1	
PP6501, 02	VJP3042G005W	CONNECTOR (MALE) 5P	2		G1111	ECKF1H102KB	G. CAPACITOR 50V 1000P	1	
PS4801, 02	VJS3042B005W	CONNECTOR (FEMALE) 5P	2		G1112	ECQB1H822JF	P. CAPACITOR 50V 8200P	1	
QR6501	UN221F	TRANSISTOR-RESISTOR	1		G1113	ECQE6104KF	P. CAPACITOR 630V 0.1U	1	
QR6502	UN211F	TRANSISTOR-RESISTOR	1		G1114	EGA1VXLV470	E. CAPACITOR 35V 47U	1	
QR6503	UN221F	TRANSISTOR-RESISTOR	1		G1121	EEUFA1E272E	E. CAPACITOR 25V 2700U	1	
QR6504	MUN2211	TRANSISTOR-RESISTOR	1		▲	G1122	EEUFA1E102B	E. CAPACITOR 25V 1000U	1
QR6505	UN2119	TRANSISTOR-RESISTOR	1		G1123	ECKD2H101KB	G. CAPACITOR 500V 100P	1	
QR6506, 07	UN221F	TRANSISTOR-RESISTOR	2		G1124	EEUFA1A332E	E. CAPACITOR 10V 3300U	1	
R6501, 02	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2		G1125	EEUFA1A102B	E. CAPACITOR 10V 1000U	1	
R6503	ERJ6GEY6750	M. RESISTOR CH 1/10W 75	1		G1126	ECKD2H101KB	G. CAPACITOR 500V 100P	1	
R6504	ERJ6GEY6271	M. RESISTOR CH 1/10W 270	1		G1127	EEUFA1H820	E. CAPACITOR 50V 82U	1	
R6505	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1		G1128	ECKF1H103ZF	G. CAPACITOR 50V 0.01U	1	
R6506	ERJ6GEY6750	M. RESISTOR CH 1/10W 75	1		G1129	ECKD2H101KB	G. CAPACITOR 500V 100P	1	
R6507	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1		G1130	EEUFA1V151B	E. CAPACITOR 35V 150U	1	
R6508	ERJ6GEY6750	M. RESISTOR CH 1/10W 75	1		G1131	ECKF1H103ZF	G. CAPACITOR 50V 0.01U	1	
R6509	ERJ6GEY6271	M. RESISTOR CH 1/10W 270	1		G1132	ECKD2H101KB	G. CAPACITOR 500V 100P	1	
R6510, 11	ERJ6GEY6222	M. RESISTOR CH 1/10W 2.2K	2		G1133	EEUFA0J561B	E. CAPACITOR 6.3V 560U	1	
R6512	ERJ6GEY6562	M. RESISTOR CH 1/10W 5.6K	1		G1134, 35	ECQB1H103JF	P. CAPACITOR 50V 0.01U	2	
R6513	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1		D1102	S1WBA60S	DIODE	1	
R6514	ERJ6GEY6471	M. RESISTOR CH 1/10W 470	1		D1103	AP01C	DIODE	1	
R6515	ERJ6GEY6272	M. RESISTOR CH 1/10W 2.7K	1		D1104	MA178	DIODE	1	
R6516	ERJ6GEY6471	M. RESISTOR CH 1/10W 470	1		D1105	MA700	DIODE	1	
R6517	ERJ6GEY6272	M. RESISTOR CH 1/10W 2.7K	1		D1106	MA4200H	DIODE	1	
R6518	ERJ6GEY6562	M. RESISTOR CH 1/10W 5.6K	1		D1107	1SS254	DIODE	1	
S6501, 02	EVQ11609K	SWITCH	2		D1108, 09	ERA15-08	DIODE	2	
S6503	VSS0404	SWITCH	1		D1110	RD100E	DIODE	1	
S6504	VSS0407	SWITCH	1		D1121	F5KF20B	DIODE	1	
S6505, 06	VSS0404	SWITCH	2		D1122	F5KQ40	DIODE	1	
VR6502	EVJYM0F15G23	V. RESISTOR 2K	1		D1123	ERA22-02	DIODE	1	
VR6503, 04	EVJ021F1554J	V. RESISTOR	2		D1124	MA185	DIODE	1	
ZB4801	VJF1076	JACK HOLDER	1		D1125	11EQS04	DIODE	1	
ZB6501, 02	VMD0504	LED HOLDER	2		D1126	MA4047-M	DIODE	1	
ZB6503	VGU5986	SLIDE KNOB	1		D1127	MA4043-L	DIODE	1	
ZB6504, 05	VMD0504	LED HOLDER	2		IC1101	STRM6559LF	IC	1	
ZB6506	VGU6968	VR KNOB	1		▲	L1101, 02	ELF18D221F	COIL 220UH	2
ZB6507	VMD0504	LED HOLDER	1		L1103, 04	VLP0083	COIL	2	
ZB6508, 09	VGU6968	VR KNOB	2		L1105	VLP0085	COIL	1	
ZB6511	VGU5986	SLIDE KNOB	1		L1106	VLP0083	COIL	1	
ZB6513, 14	VGU5986	SLIDE KNOB	2		L1121, 22	VLQ0611K220	COIL 22UH	2	
					L1123, 24	ELESE101KA	INDUCTOR 100UH	2	
					▲	P1101	VJS3306	AC INLET	1
					P1102	VJP3631A011W	CONNECTOR (MALE) 11P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
△ Q1101	PC120FY	TRANSISTOR	1						
QR1121	UN6213	TRANSISTOR-RESISTOR	1						
△ R1101	ERC12AGW334	S. RESISTOR 1/2W 330K	1						
R1102	ERB1SJ393	M. RESISTOR 1W 39K	1						
R1105	ERDS1TJ395	C. RESISTOR 1/2W 3.9W	1						
R1106	ERDS1TJ475	C. RESISTOR 1/2W 4.7W	1						
R1107	ERDS2FJ224	C. RESISTOR 1/4W 220K	1						
R1108	ERDS2FJ101	C. RESISTOR 1/4W 100	1						
R1109	ERDS2FJ152	C. RESISTOR 1/4W 1.5K	1						
R1110	ERDS2FJ103	C. RESISTOR 1/4W 10K	1						
R1111	ERDS2FJ561	C. RESISTOR 1/4W 560	1						
R1112	ERDS2FJ331	C. RESISTOR 1/4W 330	1						
R1113	ERX1SJR82	M. RESISTOR 1W 0.82	1						
R1114	ERDS2FJ222	C. RESISTOR 1/4W 2.2K	1						
R1115	ERDS2FJ100	C. RESISTOR 1/4W 10	1						
R1121	ERDS2TJ220	C. RESISTOR 1/4W 22	1						
R1122	ERDS2TJ221	C. RESISTOR 1/4W 220	1						
△ T1101	ETE28K100BY	TRANSFORMER	1						
ZA1101, 02	EYF52BC	FUSE HOLDER	2						
ZA1103	VSC4205	SHIELD COVER	1						
ZA1104, 05	VSC3434	SHIELD COVER	2						
ZA1106	VSC4259	SHIELD COVER	1						
ZA1109, 10	XTN3+8G	SCREW	2						
ZA1111	XTN3+10G	SCREW	1						
△ ZB1101, 02	VMZ2212	CAPACITOR COVER	2						
■		RT CONNECTION C.B.A.							
		MISCELLANEOUS							
	VJP2603W	CONNECTOR (MALE) 12P	1						
	VMA9509	MAIN HOLDER	1						
■		STATOR CONNECTION C.B.A.							
TH2001	VRH0120	THERMISTOR	1						
		MISCELLANEOUS							
	VJP3470	CONNECTOR (MALE)	1						
■		MOTOR C.B.A.							
		MISCELLANEOUS							
	VJP3316B002	CONNECTOR (MALE) 2P	1						

INTERNAL REFERENCE CODES

NOTE : This chart is only for internal reference.

Do not order any parts according to these codes.

P. C. B.	FILM CODE
MAIN	HOAI00-06B83
POWER	HOAI00-01639
DIGITAL LUMI. & CHRO.	HOAI01-03D75
SYUUGOU (ANALOG LUMI. & CHRO. / AFC PACK)	HOAI01-0405A
SYUUGOU (SUB POWER / TIMER / VR / FRONT JACK)	HOAI00-0392A
HI-FI	HOAI00-04664
INPUT / OUTPUT	HOAI00-03D77
HEAD AMP	HOAI04-05176
TV DEMODULATOR	HOAI00-07801
DECODER	HOAI00-07787

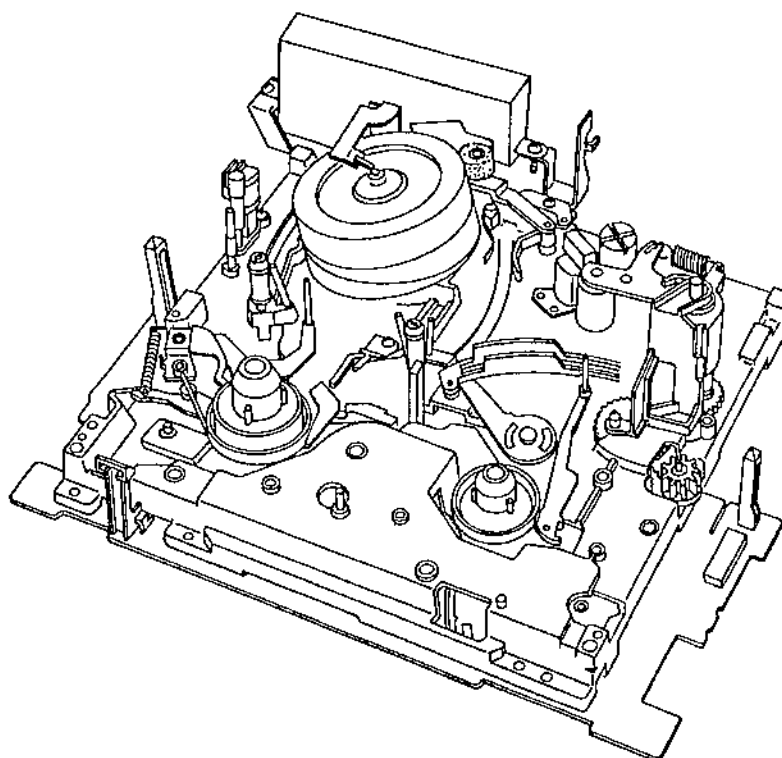
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Panasonic
MATSUSHITA ELECTRIC

Service Manual

- Sec. 1** *General Information*
- Sec. 2** *Maintenance Procedures*
- Sec. 3** *Mechanical Adjustment Procedure*
- Sec. 4** *Assembly & Phase Adjustment Procedure*

Video Cassette Recorder

**K-MECHANISM**

IMPORTANT

The **K-MECHANISM** chassis are built in several Panasonic SVHS/VHS Video Cassette Recorder.

Thus, Properly file this service manual with the service manual of the relative video cassette recorder.

Panasonic

INTRODUCTION

This Service Manual contains the technical information which service personnel to understand and service the K-Mechanism.

The Maintenance Chart, Mechanical Parts List and Mechanical Specification, please refer to the service manual of each model.

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SECTION 1

GENERAL INFORMATION

The K mechanism maintains the same high performance as G2 mechanism but with a smaller quantity of mounted parts, 40% less than G2 mechanism.

1-1. FEATURE of K MECHANISM

1-1-1. Parts Reduction

<K Mechanism>

- Reduction in the number of drive parts through the use of a single motor to perform front loading and unit loading.
- Direct drive of brakes and loading gears with the multi-function main lever.
- Elimination of sub lever and solenoids.

<Front Loading Unit>

- Elimination of a slide switch, to reduce wiring.
- Elimination or combining the joint parts.
- Smaller and thinner the top plate and rack parts.

1-1-2. No Adjustment of the following is required.

- Take-up inclined position.
- P5 Post height.

1-1-3. Reduced Gear Phase Position Alignments

The K Mechanism has only 6 gear phase alignment positions and G2 mechanism has 12 gear phase alignment positions.

1-2. OPERATION of K-MECHANISM

The K mechanism has two motors, the loading motor and capstan motor. The loading motor operates the front loading/unloading and tape loading/unloading. The capstan motor operates each mode.

The bottom C.B.A. connects the mechanism to the system control circuit. On the bottom C.B.A. there are take-up and supply photo-sensors, Sensor LED, Mode Switch Connector, Safety Tab Switch, Supply and Take-up Reel Sensors and Loading Motor Connector. All sensor information sent to the system control circuit.

1-3. EMERGENCY CASSETTE REMOVAL

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to removing cassette manually.

There are 2 methods of removing the cassette.

A. Battery Operation

- Remove the bottom plate.
- Connect the battery (Manganese-Type (AA)(R6) 3pcs./+4.5V) to P1503 as shown in Fig.G1.
- After moving the loading post to the unloaded position, disconnect the battery to stop the loading motor.
- Turn the capstan rotor clockwise to take up the tape.
- Reconnect the battery to eject the cassette.

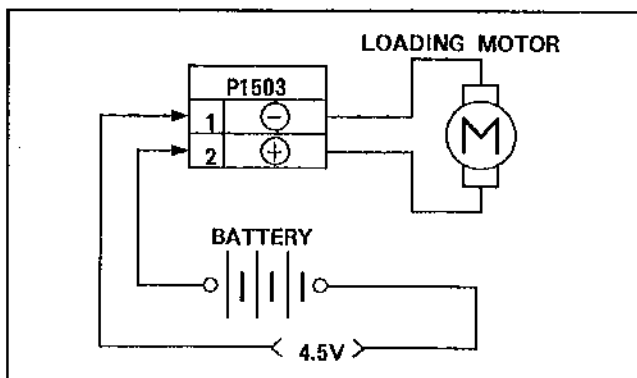


Fig.G1

B. Hand Operation

1. Remove the bottom plate.
2. Turn the worm gear to arrow mark direction (A) by finger as shown in Fig.G2 until loading post move to unloading position.
3. Turn the capstan rotor clockwise (B) to take up the tape.
4. Turn the worm gear again to eject the cassette.

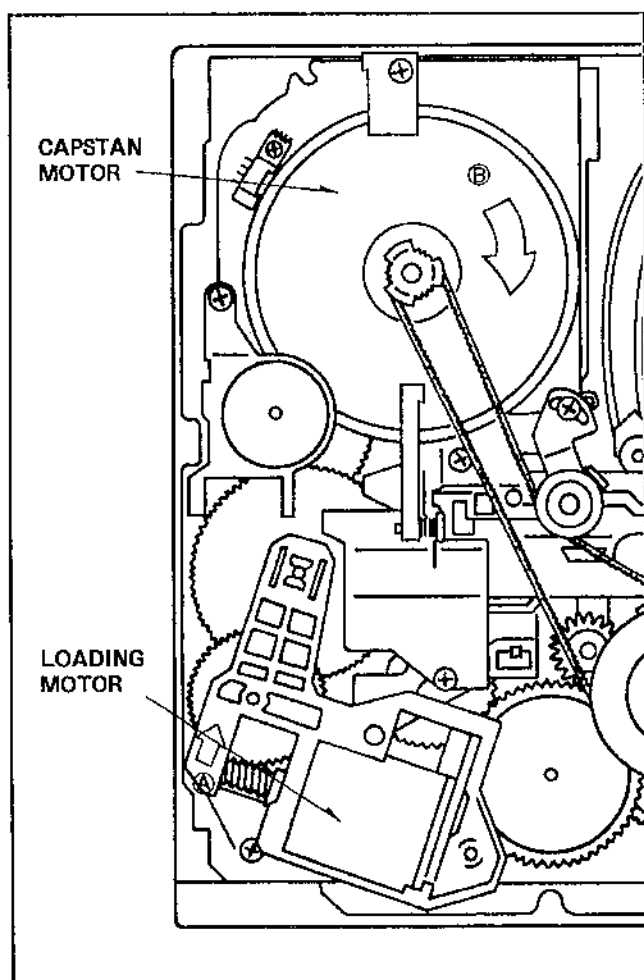


Fig.G2

1-4. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

If the Eject operation is performed without the cassette installed while repairing or making the mechanical phase alignment, the main cam gear will not rotate. For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate the carriage connection gear by hand in the direction of the arrow.

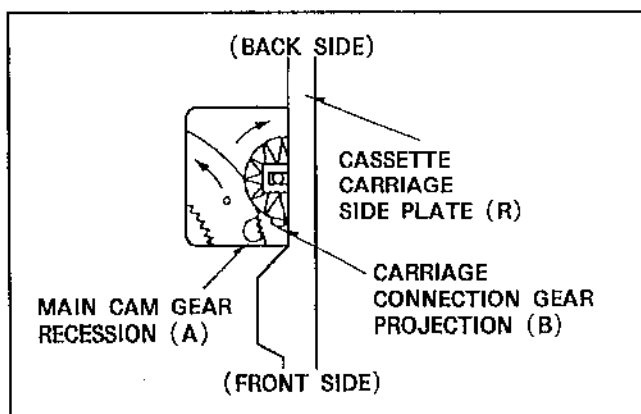


Fig.G3

1-5. REMOVAL of MECHANISM

1-5-1. Removal of Top Plate

1. Unscrew 2 screws (A) and unlock 4 locking tabs to arrow direction as shown in Fig.G4.
2. Lift up the Top Plate.

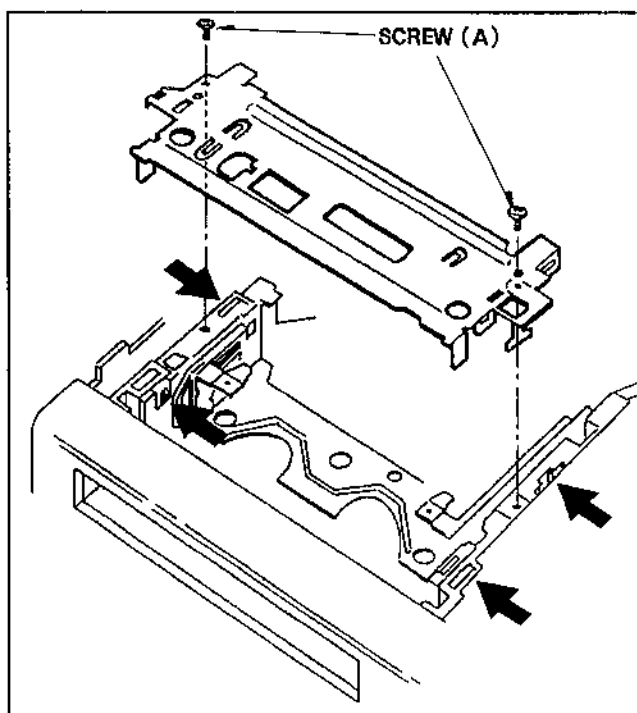


Fig.G4

1-5-2. Removal of Mechanism Chassis

1. Unscrew 2 screws (A) push the Holder Plate slightly to rear of the mechanism.
2. Unscrew a screw (B).
3. Disconnect all cable and connectors on the mechanism chassis.
 - 1)FE Head connector
 - 2)A/C Head connector
 - 3)Power Transistor connector
 - 4)Head Amp connector
 - 5)Capstan cable
4. Disconnect a Dew Sensor connector on the MAIN C.B.A.
5. Lift the mechanism chassis slightly and disconnect a connector of Cylinder Motor and a cable of Mechanism Connection C.B.A.
Then mechanism chassis out of the unit.

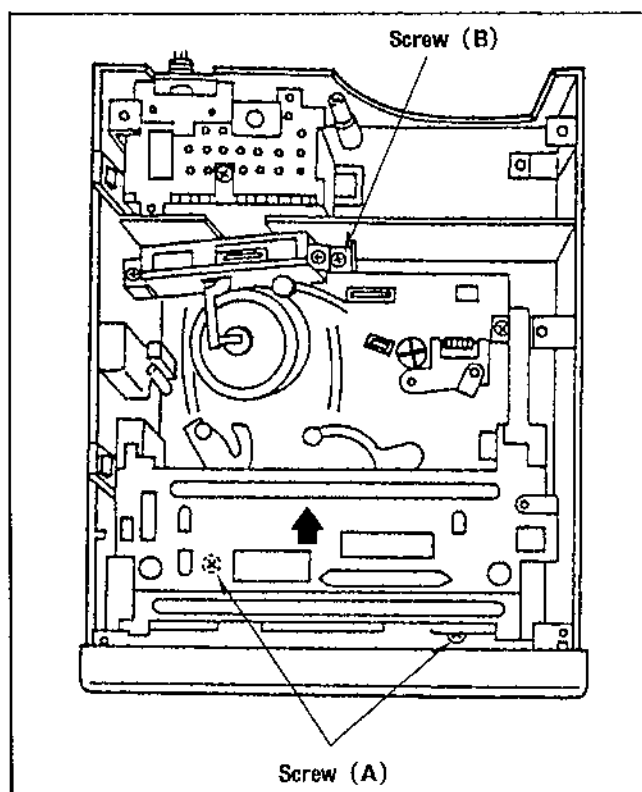


Fig.G5

1-5-3. Removal of Mechanism Connection C.B.A.

1. Unscrew 4 screws (C).
2. Lift up the Mechanism Connection C.B.A.

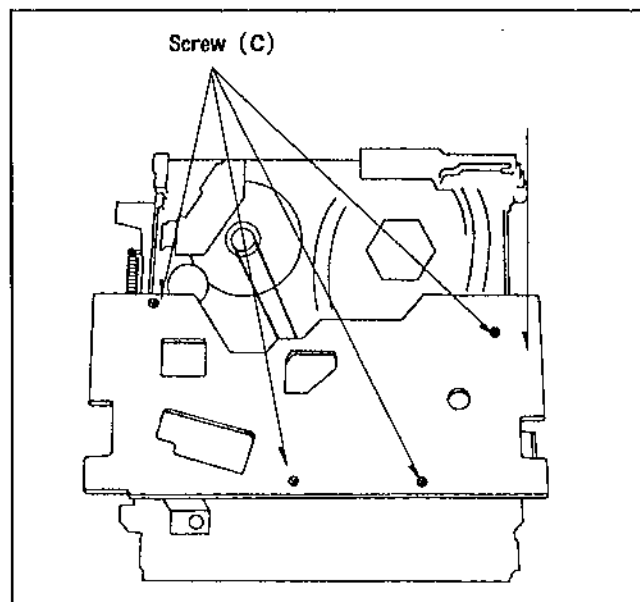
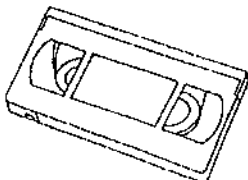
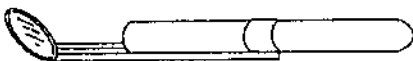
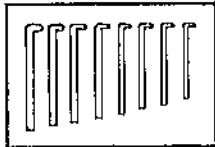
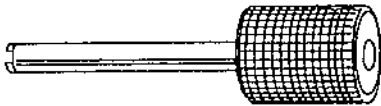
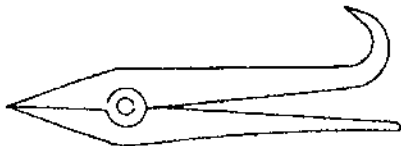
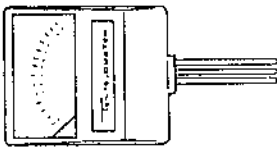
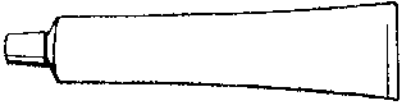
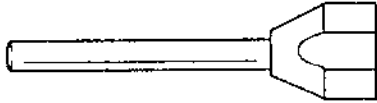
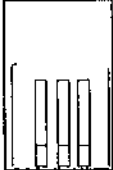
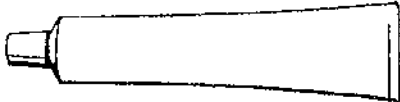
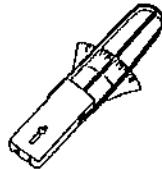


Fig.G6

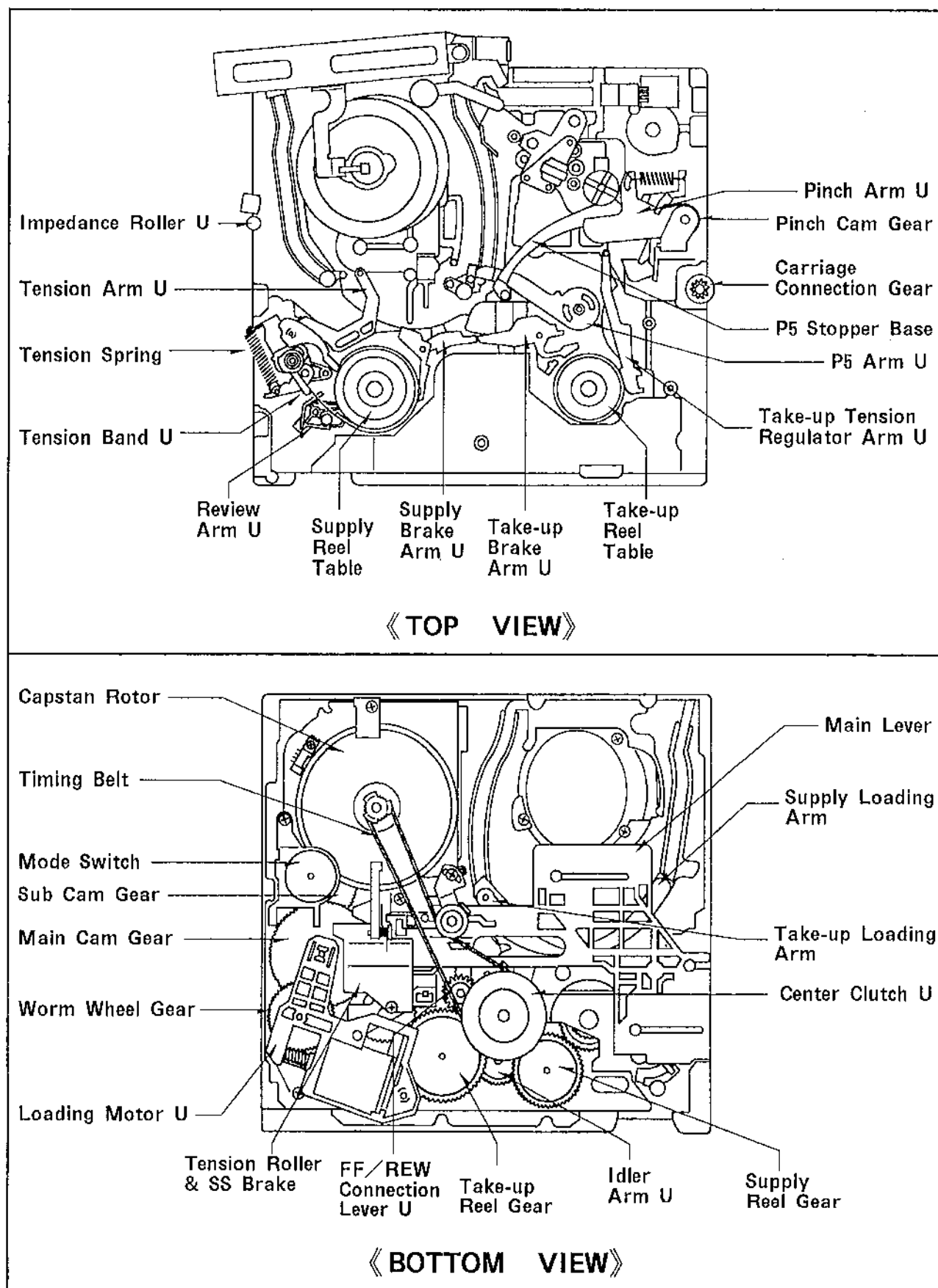
1-6. SERVICE FIXTURES AND TOOLS

The regular maintenance is important to maintain the initial specification of the unit and prevent tape damage. The specified servicing fixture must be used to conduct adjustment.

The following fixtures, tools and measuring equipments are required to conduct complete Mechanical Adjustments.

VFM8080HQFP: VHS Alignment Tape 	VFK0948: Check Light 	VFK0326: Hex Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm) 
VFK0329: Post Adj. Screwdriver 	VFK0335: Retaining Ring Remover 	VFK0132: Back Tension Meter (Tentelometer, Made in U.S.A.) 
MOR265: Morlytone Grease (Black) (for metal parts) 	VFK0851: Center Fixing Tool 	VFK27: Head Cleaning Stick 
VFK0680: S.C.R. Grease (White) (for plastic parts) 	VFK66 : Fan Type Tension Gauge 	VFK0330: Fine Adj. Screwdriver 

1-7. Mechanical Parts Location



SECTION 2

MAINTENANCE PROCEDURE

The MAINTENANCE CHART please refer to the Maintenance Section which are shown in service manual for each model.

2-1. Replacement of the Upper Cylinder Unit

1. Unscrew 2 screws (A).
2. Unsolder arrows marked portions on the top of the Upper Cylinder as shown in Fig.M1.
3. Remove the Upper Cylinder.
4. The Upper Cylinder can be reinstalled by reversing the removal procedure.
However, when insert the Upper Cylinder be extremely carefully so that marked portion of P.C.board of the Upper Cylinder correctly matches to mark of the Lower Cylinder as shown in Fig.M2.

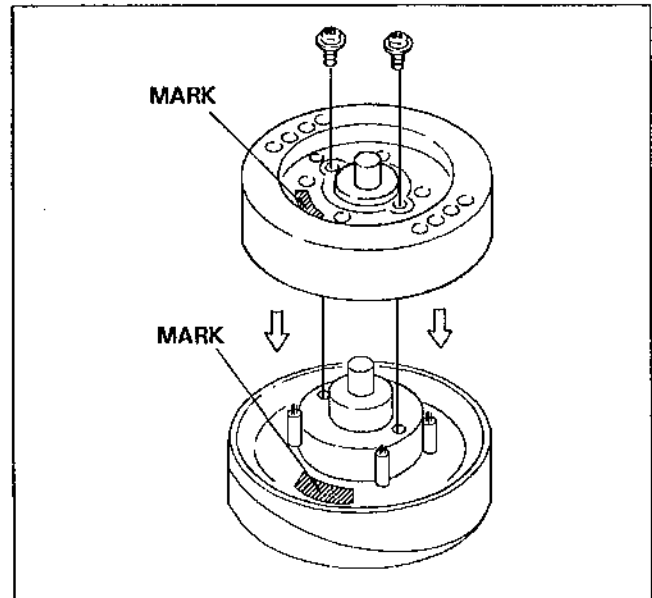


Fig.M2

<NOTE>

After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustments.

3-2. FINE ADJUSTMENT of P2 and P3 POSTS

3-6. HORIZONTAL POSITION ADJUSTMENT

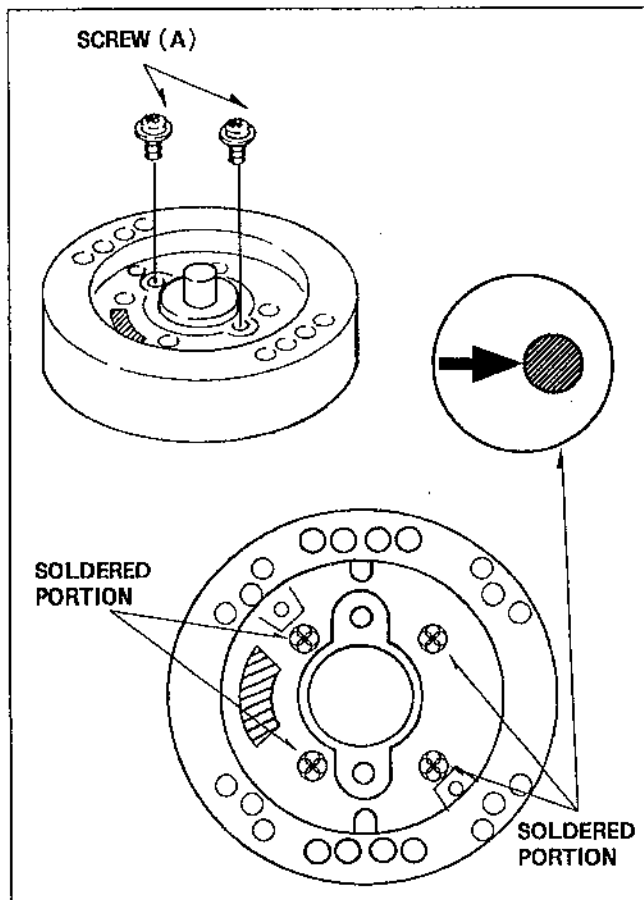


Fig.M1

2-2. Replacement of Cylinder Unit

1. Remove the Earth Plate.
2. Unscrew 2 screws both side of Head Amp Unit and lift up the Head AMP.
3. Unscrew 3 screws (B) from back side of the mechanical chassis then remove the Cylinder Unit.
4. The Cylinder Unit can be reinstalled by reversing the removal procedure.

<Note>

After reinstall the Cylinder Unit should be perform Mechanical and Electrical adjustments.

3-2. FINE ADJUSTMENT of P2 and P3 POSTS

3-6. HORIZONTAL POSITION ADJUSTMENT

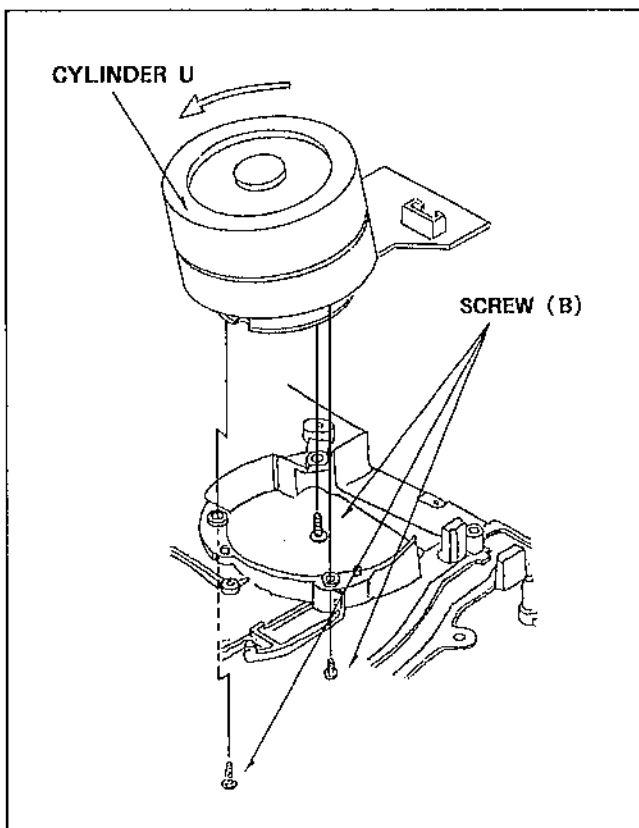


Fig.M3

2-3. Replacement of A/C HEAD Unit

1. Unscrew 3 screws (C)(D)(E) with the 3 springs then remove the A/C Head unit from the A/C Head Base.
2. The A/C Head Unit can be reinstalled by reversing the removal procedure.

<Note>

A space should be equality between the A/C Head U and the A/C Head Base when reinstall the A/C Head unit.

After reinstall the A/C Head Unit should be perform Mechanical and Electrical adjustments.

3-2. FINE ADJUSTMENT of P2 and P3 POSTS

3-3. COARSE ADJUSTMENT of A/C HEAD HEIGHT(1)

3-4. COARSE ADJUSTMENT of A/C HEAD HEIGHT(2)

3-5. FINE ADJUSTMENT of A/C HEAD HEIGHT

3-6. HORIZONTAL POSITION ADJUSTMENT

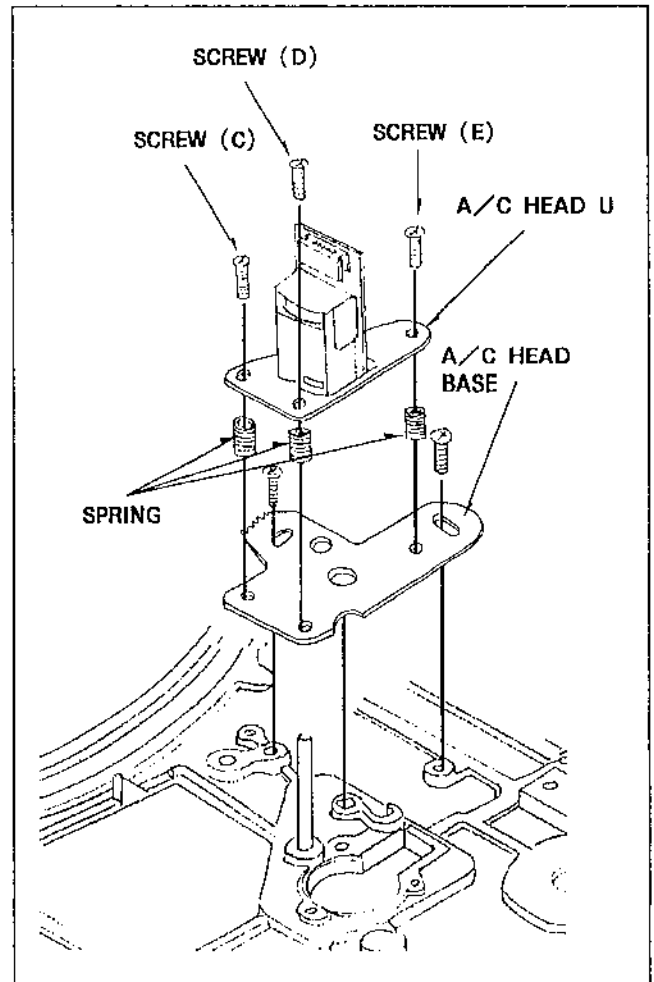


Fig.M4

2-4. Replacement of Full Erase Head Unit

1. Disconnect a connector (A).
2. Unscrew screw (F) then remove the FE Head.
3. FE Head Unit put into hole on the mechanical chassis and can be reinstalled by reversing the removal procedure.

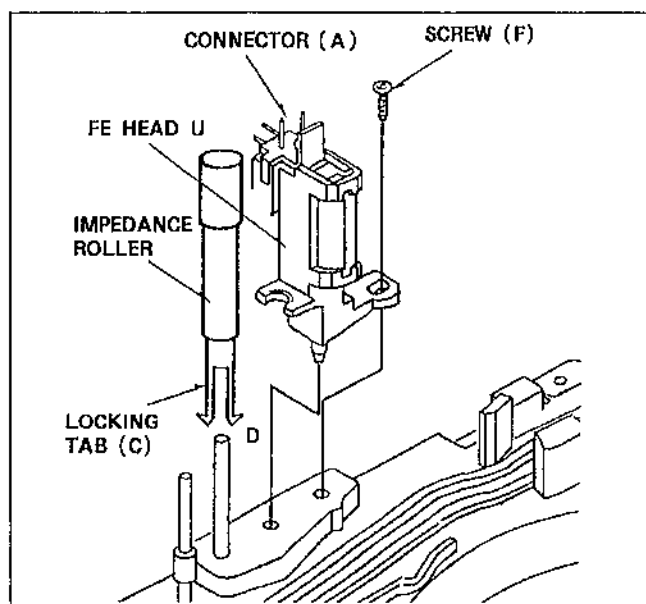


Fig.M5

2-5. Replacement of Capstan Rotor Unit and Stator Unit

1. Remove the Rotor Stopper.
2. Carefully lift up the Capstan Rotor from the Capstan Housing, taking care so as not to lose the 2 Oil Seals.
3. Unscrew 3 screws (G) and remove the Capstan Stator Unit as shown in Fig.M6.
4. The Capstan Rotor and Stator can be reinstalled by reversing the removal procedure.

<Note>

After reinstall the Capstan Rotor and Stator Units should be perform Mechanical adjustment.

- 3-9. ADJUSTMENT of CAPSTAN HOUSING & STATOR
- 3-10. ADJUSTMENT of THRUST GAP
- 3-11. ADJUSTMENT of FG GAP

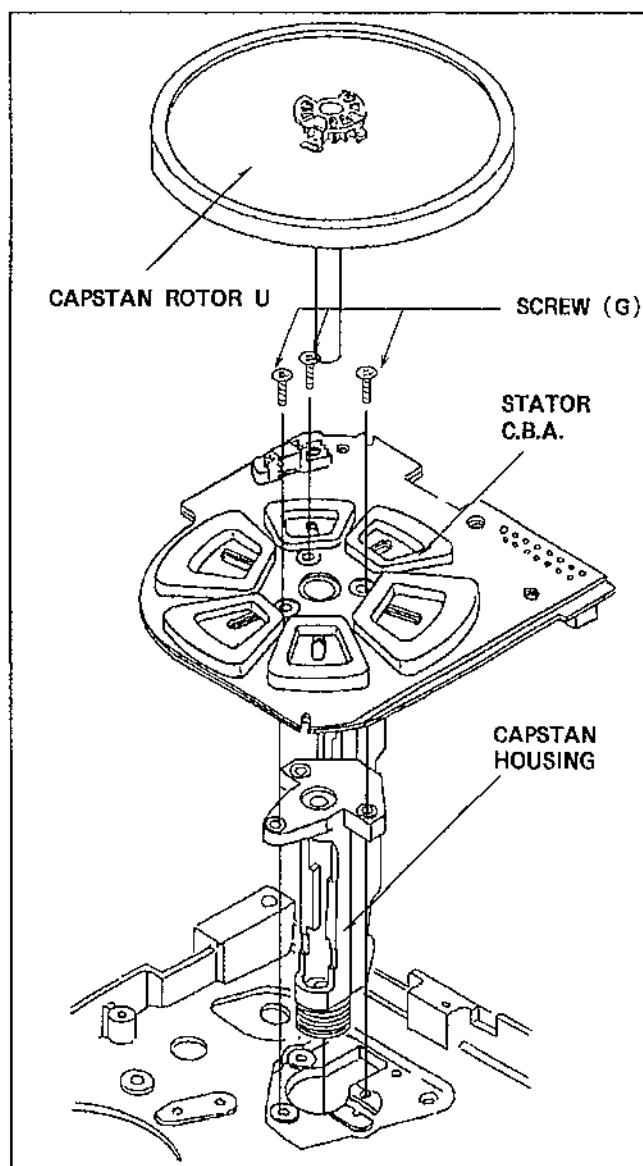


Fig.M6

2-6. Replacement of Impedance Roller Unit

1. Remove the Full Erase Head Unit with removal procedure(2-4).
2. Unlock then locking tab to direction of arrow mark as shown in Fig.M5 and remove the Impedance Roller Unit.
3. The Impedance Roller Unit can be reinstalled by reversing the removal procedure.

2-7. Replacement of Pinch Arm Unit

1. Unlock the locking tab on the Opener Piece and remove it from the shaft.
2. Remove the Pinch Arm Unit from the shaft.
3. The Pinch Arm Unit can be reinstalled by reversing the removal procedure.

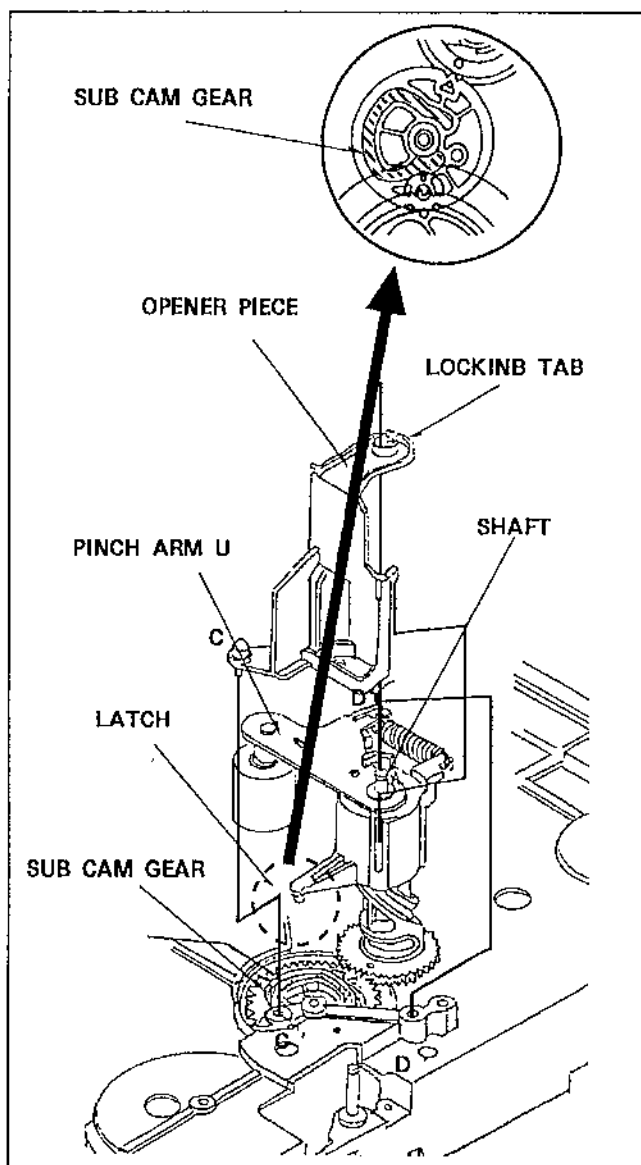


Fig.M7

2-8. Replacement of Take-up and Supply Reel Base Units

A. Supply Reel Base Unit

1. Remove the Tension Band Unit on the Supply Reel Base Unit.
2. Push the Supply main Brake Arm to direction of arrow mark and unlock the locking tab on the Supply Reel Base then pull up the Supply Reel Base Unit as shown in Fig.M8.
3. The Supply Reel Base Unit can be reinstalled by reversing the removal procedure.

B. Take-up Reel Base Unit

1. Push the Take-up Main Brake Arm to direction of arrow mark and unlock the locking tab on the top of Take-up Reel Base then pull out the Supply Reel Base Unit as shown in Fig.M8.

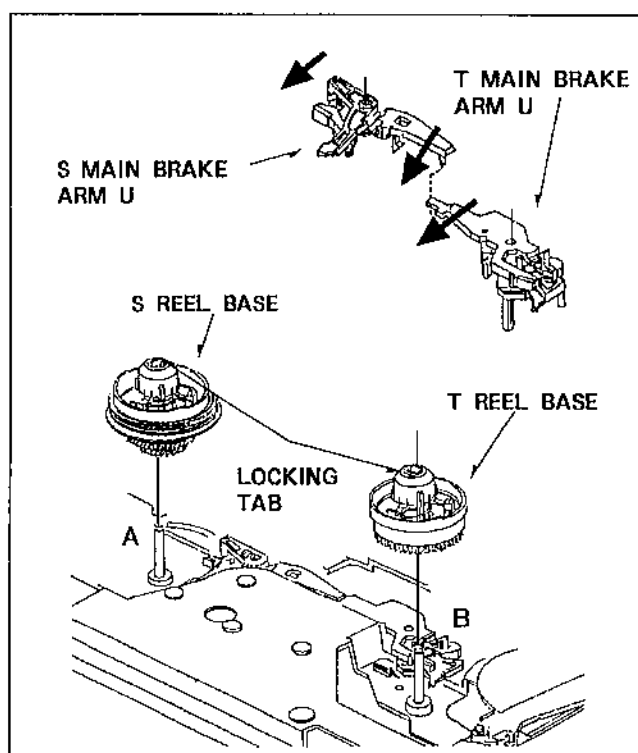


Fig.M8

2-9. Replacement of Take-up and Supply Brake Arm Unit.

1. Unlock the locking tab (A) to direction of arrow mark and lift up the Supply Brake Arm Unit.
2. Unlock the locking tab (B) and lift up the Take-up Brake Arm Unit.
3. Both Brake Arm Units can be reinstalled by reversing the removal procedure. However the boss (C) of the Supply Brake Arm Unit insert to hole (E) of mechanical chassis while pushing the Main Lever to direction of arrow mark as shown in Fig.M9. (expanded view)

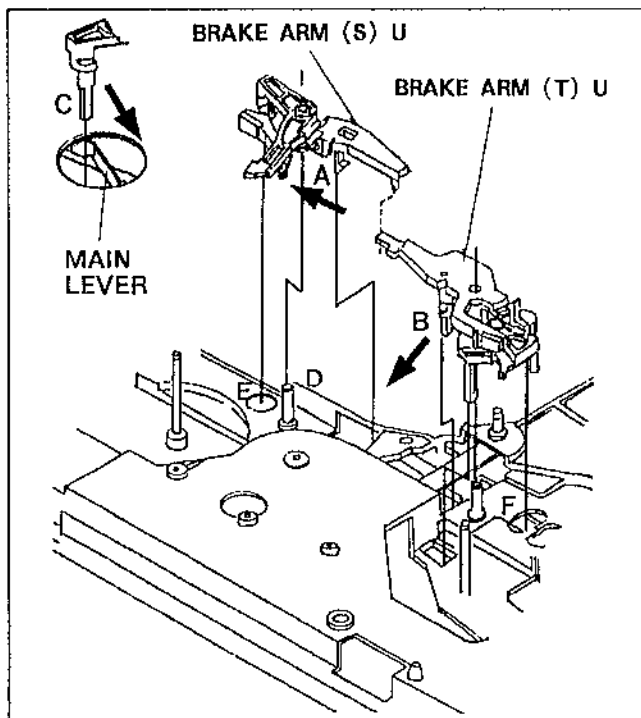


Fig.M9

2-10. Replacement of Tension Band Unit

1. Remove the cut washer (H) and lift up the Tension Arm Unit with the Tension Band and spring from the Tension Spring Arm.
2. Unlock the locking tab (A) to direction of arrow mark and remove the Tension Band from the Arm Unit.
3. Unlock the locking tab (B) and remove the Tension Band from the Tension Arm Unit.
4. The Tension Band Unit can be reinstalled by reversing the removal procedure.

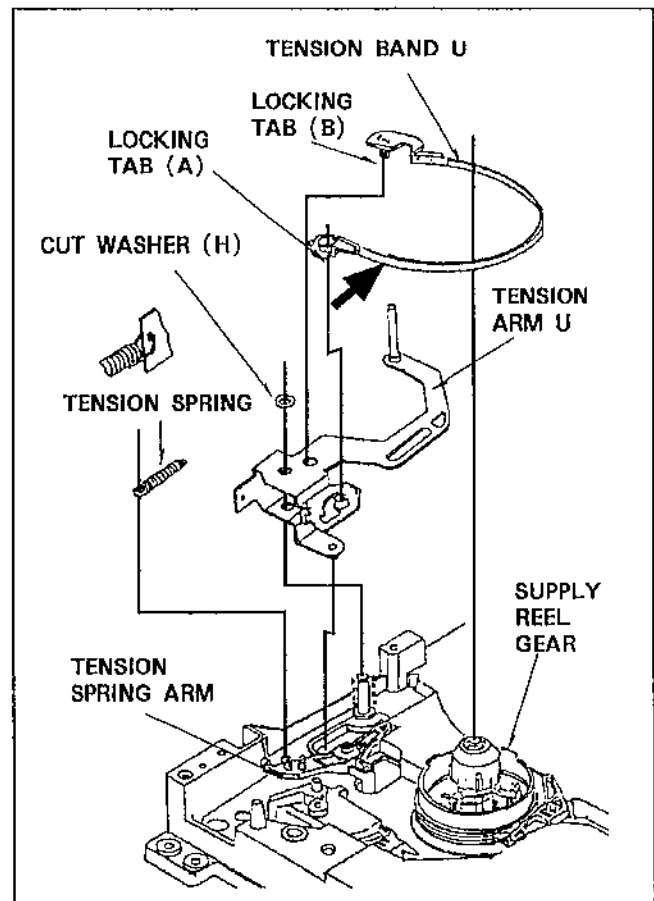


Fig.M10

2-11. Replacement of Loading Motor Unit

1. Unscrew screw (I).
2. Unlock the locking tab (A) from the top of the mechanical chassis.
3. Lift up the Loading Motor Bracket and push it to direction of arrow mark as shown in Fig.M11.
4. When reinstall the Loading Motor Unit, insert the locking hole (B') of Loading Motor Bracket Unit to shaft (B) on the mechanical chassis. Also a hole (C) of the loading Motor Unit must be matched to the shaft (C') as shown in Fig.M11.

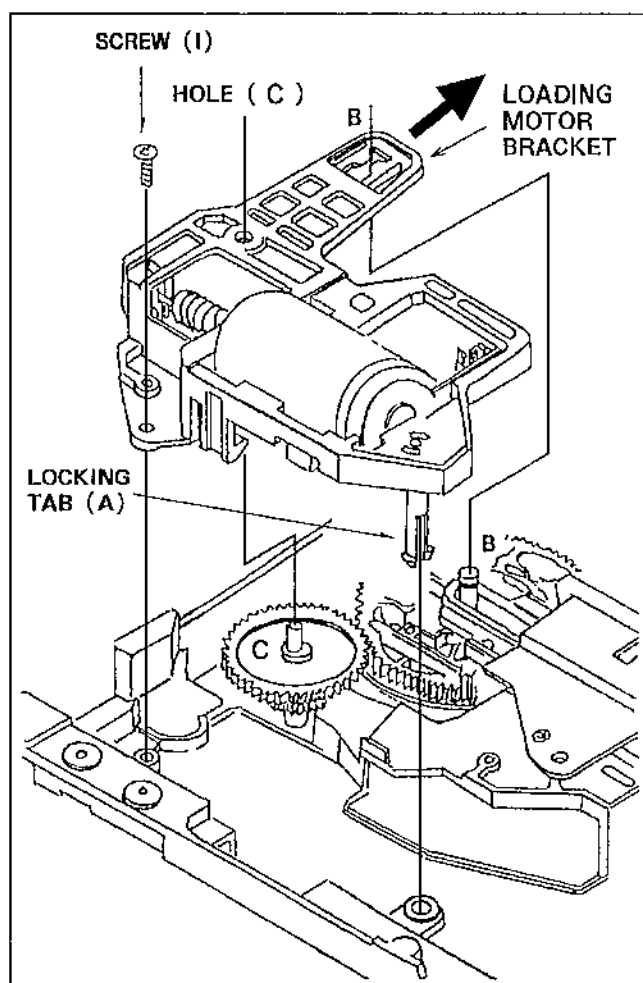


Fig.M11

2-12. Replacement of Cleaner Roller Unit

1. Unlock the locking tab (A) as shown in Fig.M12. and lift it up.
2. The Cleaner Roller Unit can be reinstalled by reversing the removal procedure.
3. Replacement of the Cleaner Rubber Unit. Hold the Cleaner Roller Unit and unlock the locking tab (B) then lift it up.

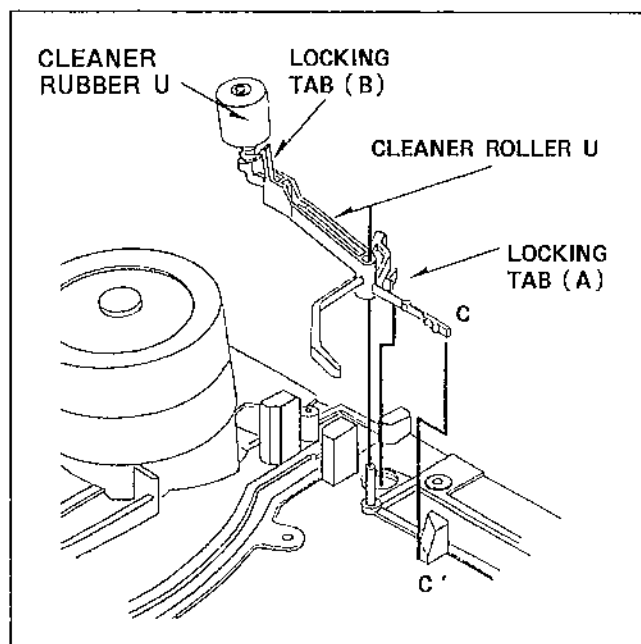


Fig.M12

2-13. Replacement of SS Brake Base Unit and Timing Belt

1. Remove the Timing Belt.
2. Unscrew (J) and (K) then remove SS Brake Base Unit.
3. SS Brake Unit and Timing Belt can be reinstalled by reversing the removal procedure.

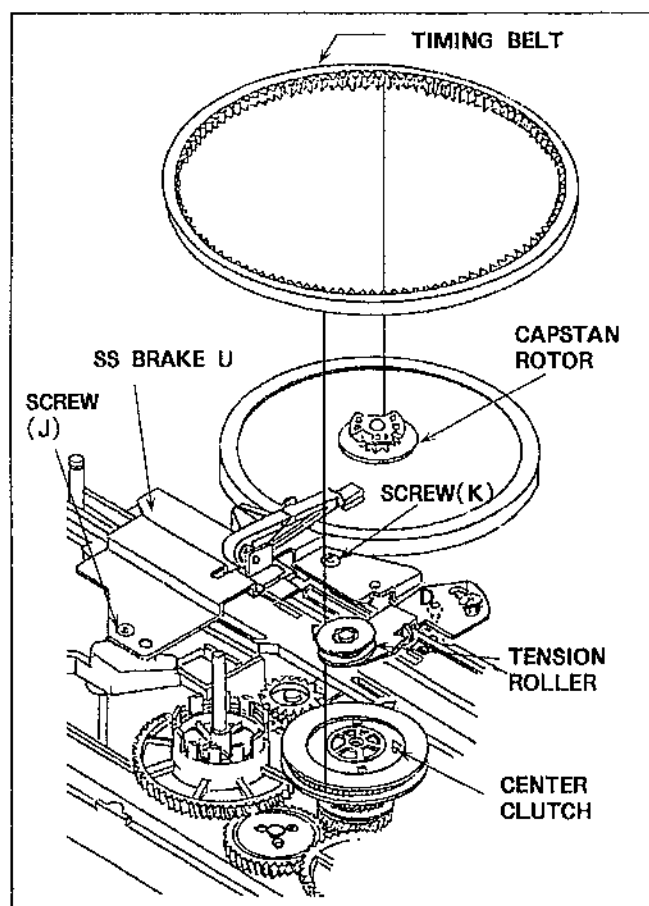


Fig.M13

2-14. Replacement of Supply & Take-up Inclined Base Unit

1. Remove SS Brake Unit, Main Lever Unit and Supply and Take-up Loading Arm Unit refer to SECTION 2. and 3. in this service manual.
2. Remove the Inclined Holder base (A) from back side of mechanism chassis.
3. Remove the Supply and Take-up Inclined Base Units.
4. The both Inclined Base Units can be reinstalled by reversing the removal procedure.

<NOTE>

After reinstall the Inclined Base Unit should be perform Mechanical adjustment.

3-2. FINE ADJUSTMENT of P2 and P3 POSTS

3-5. FINE ADJUSTMENT of A/C HEAD HEIGHT

3-6. HORIZONTAL POSITION ADJUSTMENT of A/C HEAD

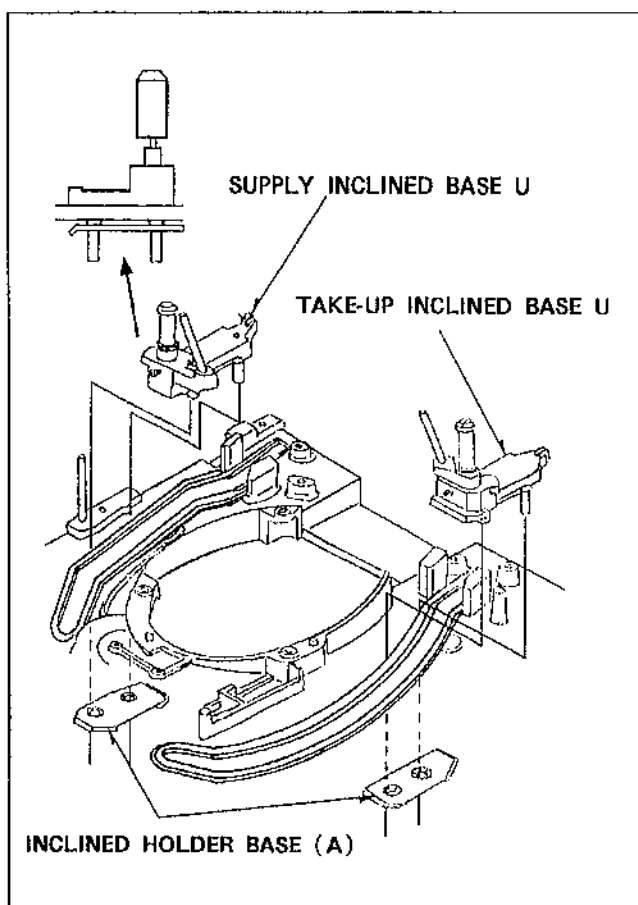


Fig.M14

SECTION 3

MECHANICAL ADJUSTMENT PROCEDURE

3-1. Coarse Adjustment of Tape Guide Post Height

1. Remove the Top Plate and Cassette Holder.
2. Turn the Loading Motor until the unloading completes.
3. Loosen the fixing screw of P2 and P3 Posts.
4. Rotate the P2 and P3 Posts clockwise to the end.
5. Rotate the P2 and P3 Posts twice counter-clockwise as shown in Fig.M15.
6. Install the Cassette Holder and Top Plate.
7. Playback the normal tape and make sure that the edge of not curing at the bottom or top end of the P1,P2,P3 and P4 Posts as shown in Fig.M17.

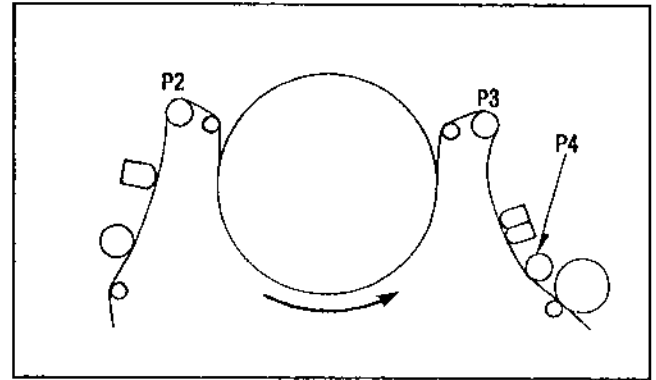


Fig.M16

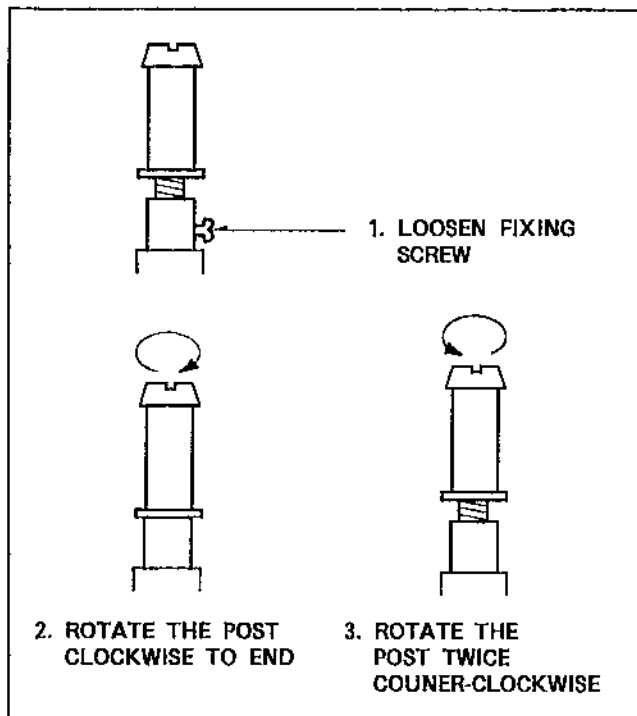


Fig.M15

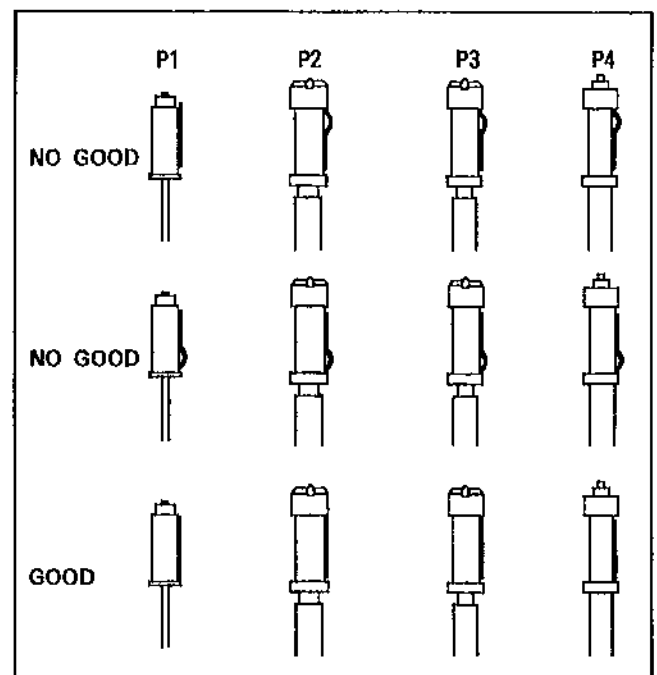


Fig.M17

3-2. Fine Adjustment of P2 and P3 Posts

1. Connect the oscilloscope to the Test Point of the HEAD AMP (Video RF Envelope) and the head switching pulse as a triggering signal.

<NOTE>

TEST POINT please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

2. Playback the 2nd portion of the alignment tape.
3. Press the tracking control button on the Front panel and adjust for maximum Video RF envelope.
4. If the RF envelope appears like example "A" or "B" in Fig.M18 then adjustment of the tape guide post (P3:Exit) is necessary.
5. Adjust the P3 post with the post adjustment screwdriver so that the RF envelope waveform at the exit portion becomes flat as shown in Fig.M18.
6. If the RF envelope appears like example "C" or "D" in Fig.M18 then adjustment of the tape guide post (P2:Entrance) is necessary.
7. Adjust the P2 post with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M18.

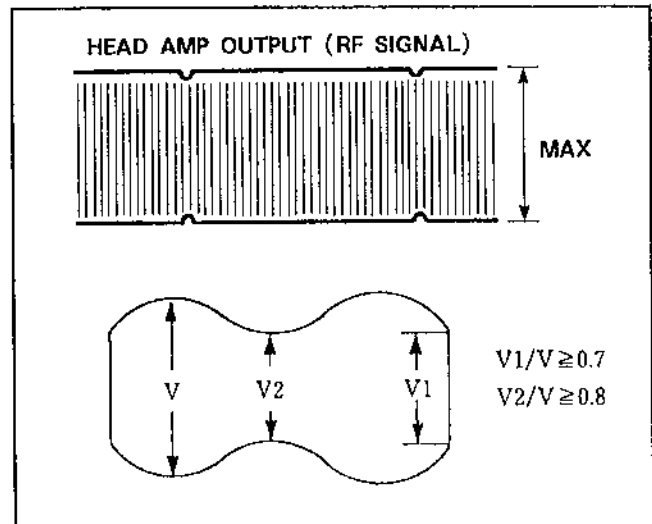


Fig.M19

3-3. Coarse Adjustment of A/C Head Height (1)

<NOTE>

This procedure should be performed only when the A/C Head is replaced.

1. Playback the normal tape.
2. Turn the 3 screws (A)(B)(C) mutually so that lower edge of tape running at lower edge of A/C Head and confirm a space as much as possible to flat between the A/C Head Unit and the A/C Head Base.

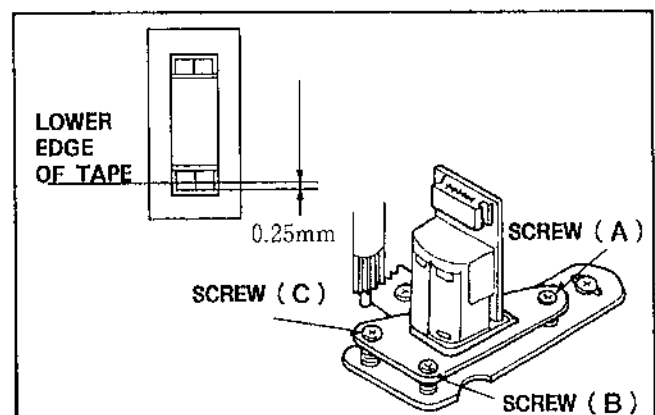


Fig.M20

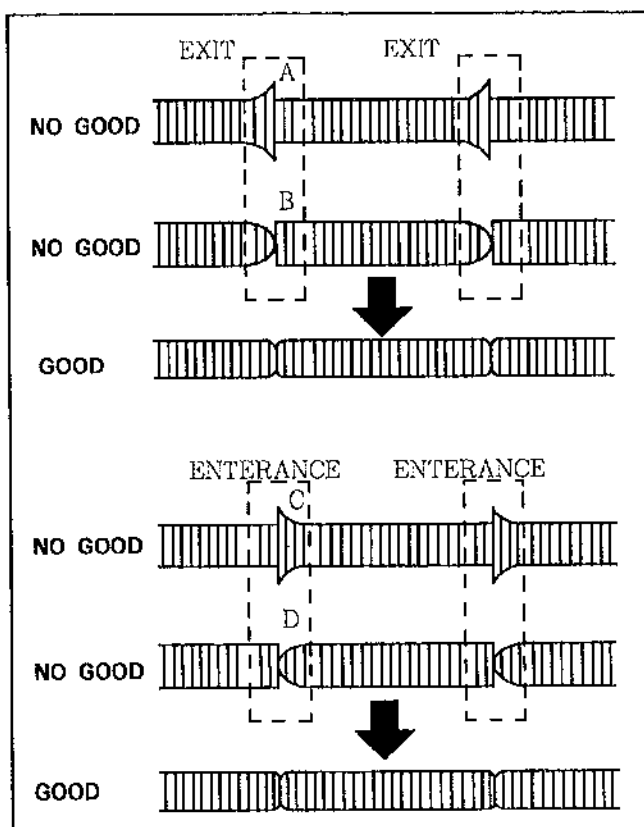


Fig.M18

3-4. Coarse Adjustment of A/C Head Height (2)

1. Playback the normal tape.
2. Rotate the screw (A) as shown in Fig.M20 until the wrinkle appears on the lower edge of tape at P4 Post.
3. Rotate the screw (B) until the wrinkle just disappear on the lower edge of tape at P4 Post.

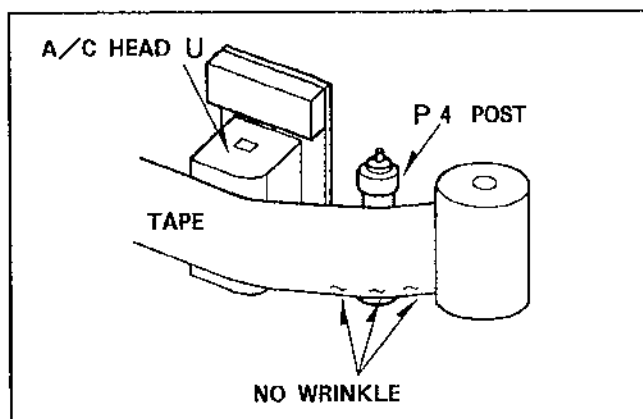


Fig.M21

3-5. Fine Adjustment of A/C Head Height

1. Connect the oscilloscope to the Audio output.
2. Playback the 2nd portion of the alignment tape.
3. Rotate the screw (C) so that audio signal becomes maximum.

<When moving the A/C Head up>

1. Rotate the screw (A) counter-clockwise until the wrinkle appears on the lower edge of tape at P4 Post.
2. Rotate the screw (B) counter-clockwise until just disappears on the lower edge of tape at P4 Post.
3. Rotate the screw (C) counter-clockwise until the audio signal is maximized.

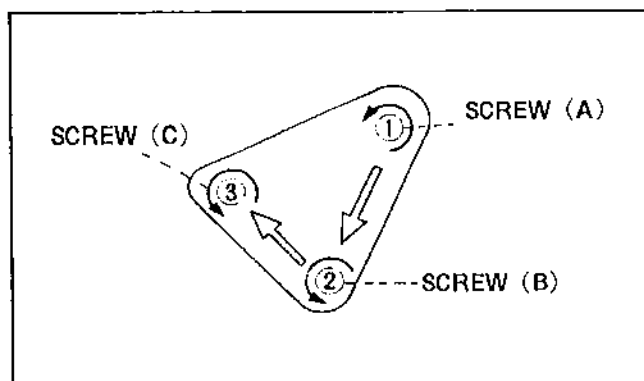


Fig.M22

<When moving the A/C Head down>

1. Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape at P4 Post.
2. Rotate the screw (A) clockwise until the wrinkle just disappear on the lower edge of tape at P4 Post.
3. Rotate the screw (C) clockwise until the audio signal is maximized.

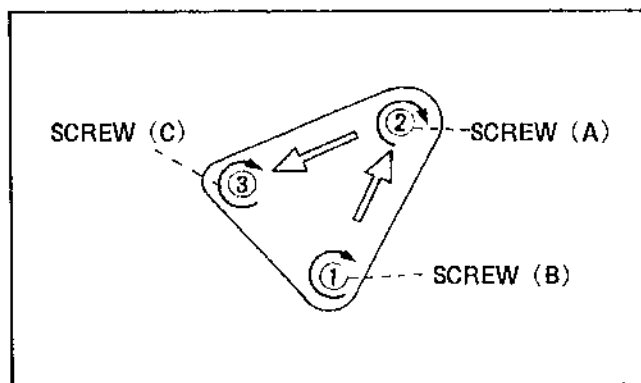


Fig.M23

3-6. Horizontal Position Adjustment of A/C Head.

<NOTE>

TEST POINT and JUMPER WIRE position, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

1. Set the tracking control into the center fix position by connect a jumper wire on the MAIN C.B.A.
2. Connect the oscilloscope to the Audio output, Video RF envelope on the Head Amp test point and head switching pulse on the Head Amp test point as for triggering.
3. Playback the 4th portion of the alignment tape.
4. Loosen the 2 screws (D)(E).
5. Adjust the A/C Head Base (F) so that the phase of audio drop-out and RF video drop-out becomes the same as possible. Fig.M24.
6. Playback the 2nd portion of the alignment tape.
7. Adjust the A/C Head Base (F) until the video RF signal is maximized.
8. Carefully tighten screw (D) with hold the A/C Head Base position with the Fine Adjustment Gear Driver then tighten screw (E).

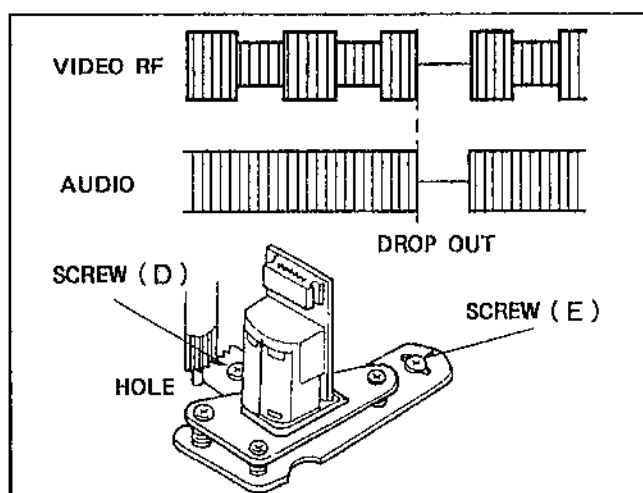


Fig.M24

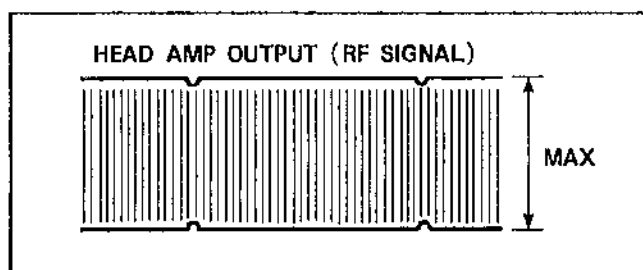


Fig.M25

3-7. Adjustment of Tension Post Position

1. Remove the Top Plate and Cassette Holder.
2. Turn the Loading Motor until the loading completes.
3. Adjust the hole of the Tension Band Unit by Hex wrench so that the left edge of the Impedance Roller and Tension Arm Unit as shown in Fig.M26.

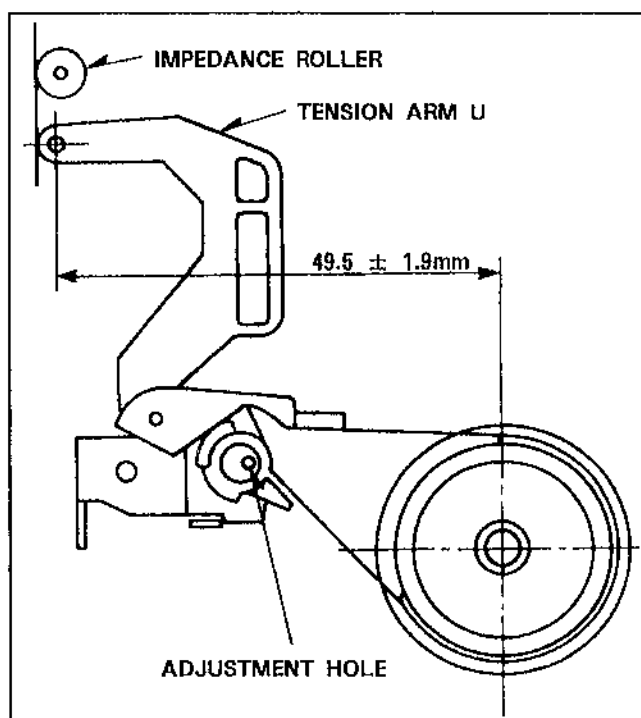


Fig.M26

3-8. Adjustment of Back Tension

1. Playback the cassette tape from the beginning of tape and wait until tape movement has stabilized.
2. Insert the back tension meter into the path of the tape and confirm the back tension to be within specification as shown in Fig.M27.
3. If back tension is not in the specification, change the spring notch as shown in Fig.M28.

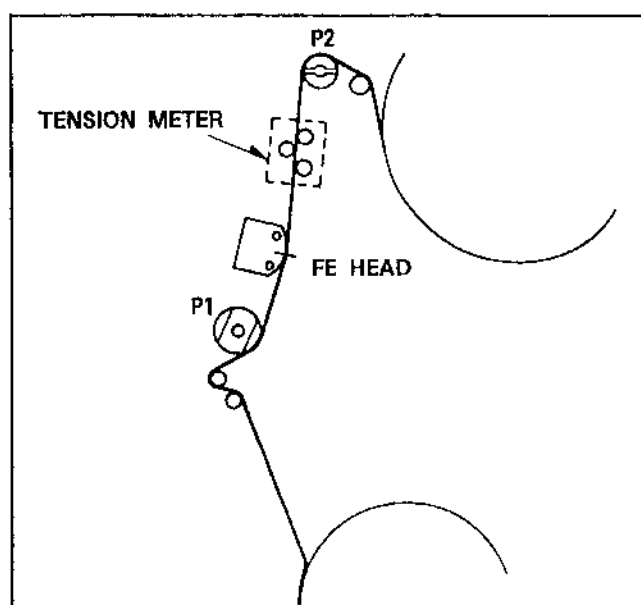


Fig.M27

<NOTE>

Specification of Back Tension, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

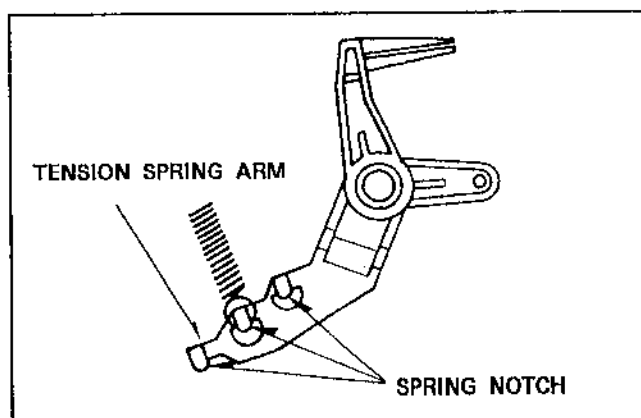


Fig.M28

3-9. Adjustment of Capstan Housing & Stator.

1. Install the Capstan Housing into the mechanical chassis and place the Capstan Stator into position.
2. Loosely tighten 3 screws (G).
3. Insert the Center Fixing Tool (VFK0851) as shown in Fig.M29.
4. Tighten 3 screws (G).
5. Remove the Center Fixing Tool.

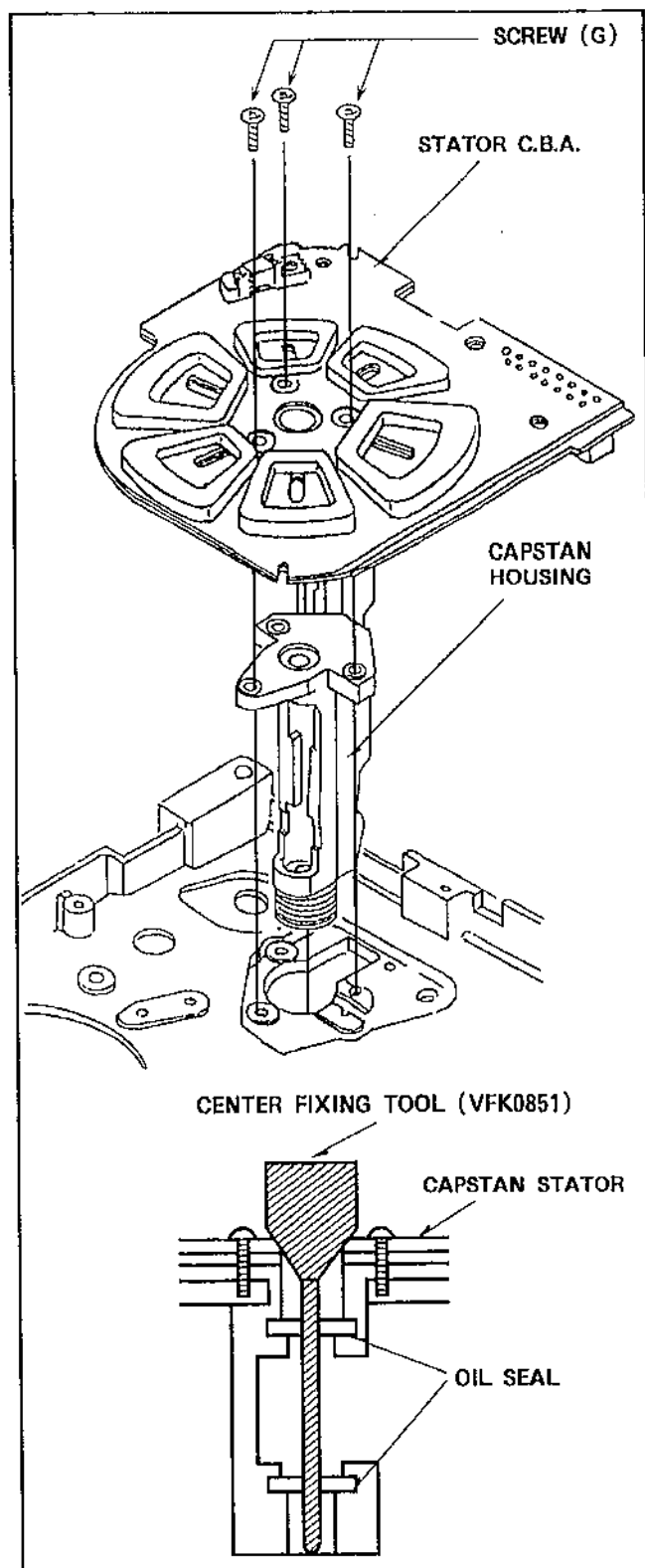


Fig.M29

3-10. Adjustment of Thrust Gap

1. Turn the Thrust Adjustment Screw clockwise to until the Capstan Rotor just separate from the Capstan Stator while rotating the Capstan Rotor by hand.
2. Turn the Thrust Adjustment Screw clockwise to 180 degrees from point at step 1.
3. Set the 2 Oil Seal to edge of the Capstan Housing as show in Fig.M30.

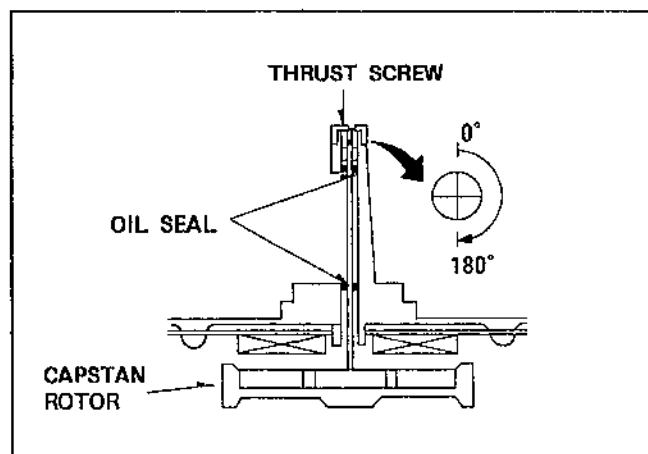


Fig.M30

3-11. Adjustment of FG GAP

1. Loosen screw (H) and set the Fine Adjustment Screw Driver in the hole on the Capstan Stator Unit.
2. Adjust the gap between FG Head and the Capstan Rotor.
3. After adjustment, tighten a screw (H).

<NOTE>

Specification of FG GAP, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

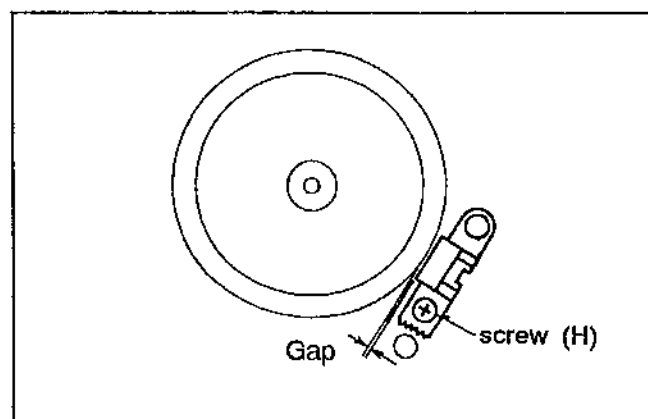


Fig.M31

3-12. Pressing Force Confirmation of the Pressure Roller

1. Playback the end portion of the 120 minutes tape.
2. Set the Fan type tension gauge to point (A) and push to direction indicated by the arrow (B) as shown in Fig.M32.
3. Confirm that reading of tension gauge is in specification at momentary stop the tape running.

<Note>

Specification of PRESSING FORCE, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

If the pressing force is not in specification, change the pressure spring.

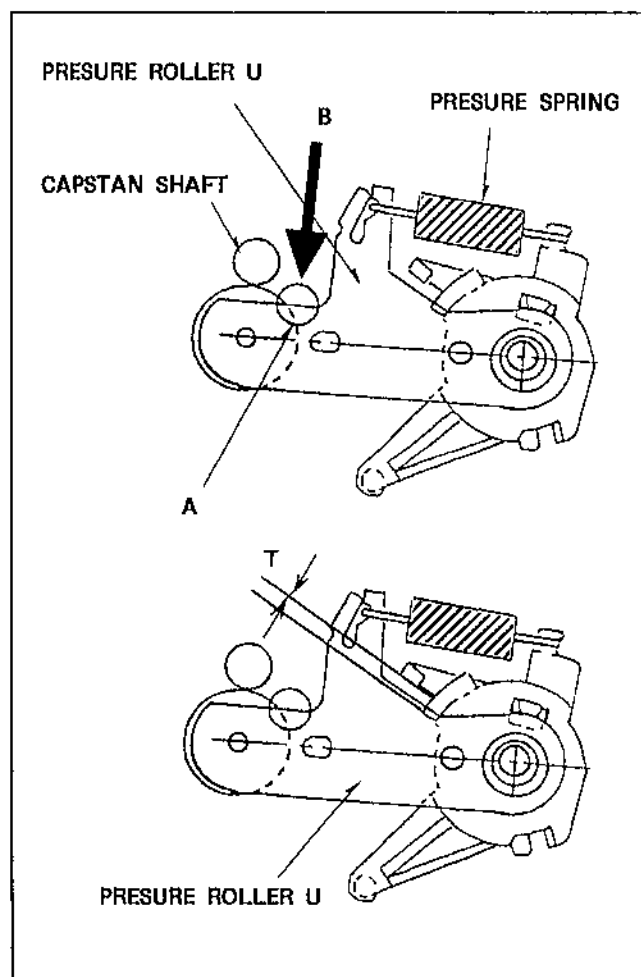


Fig.M32

SECTION 4

ASSEMBLY & PHASE ADJUSTMENT PROCEDURE

4-1. Assembly Procedures of Mechanism

The gear phase alignment is performed in the cassette down position and is crucial for the K-Mechanism to operate correctly.

1. Top view of gear phase alignment marks.
There are alignment marks on the pinch cam gear and sub cam gear. there is one alignment mark on the carriage gear.
2. Bottom view of gear phase alignment marks.
There are alignment marks on take-up loading gear and supply loading gear. There is an additional mark on the take-up loading gear that aligns with the mark on the main lever. There are alignment marks on the main cam gear and the sub cam gear. The mode switch gear mark aligns with a notch in the mode switch frame.

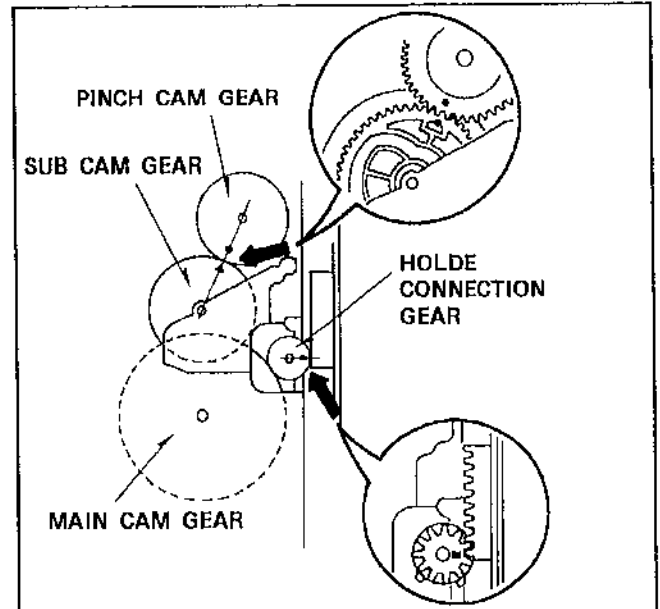


Fig.M33

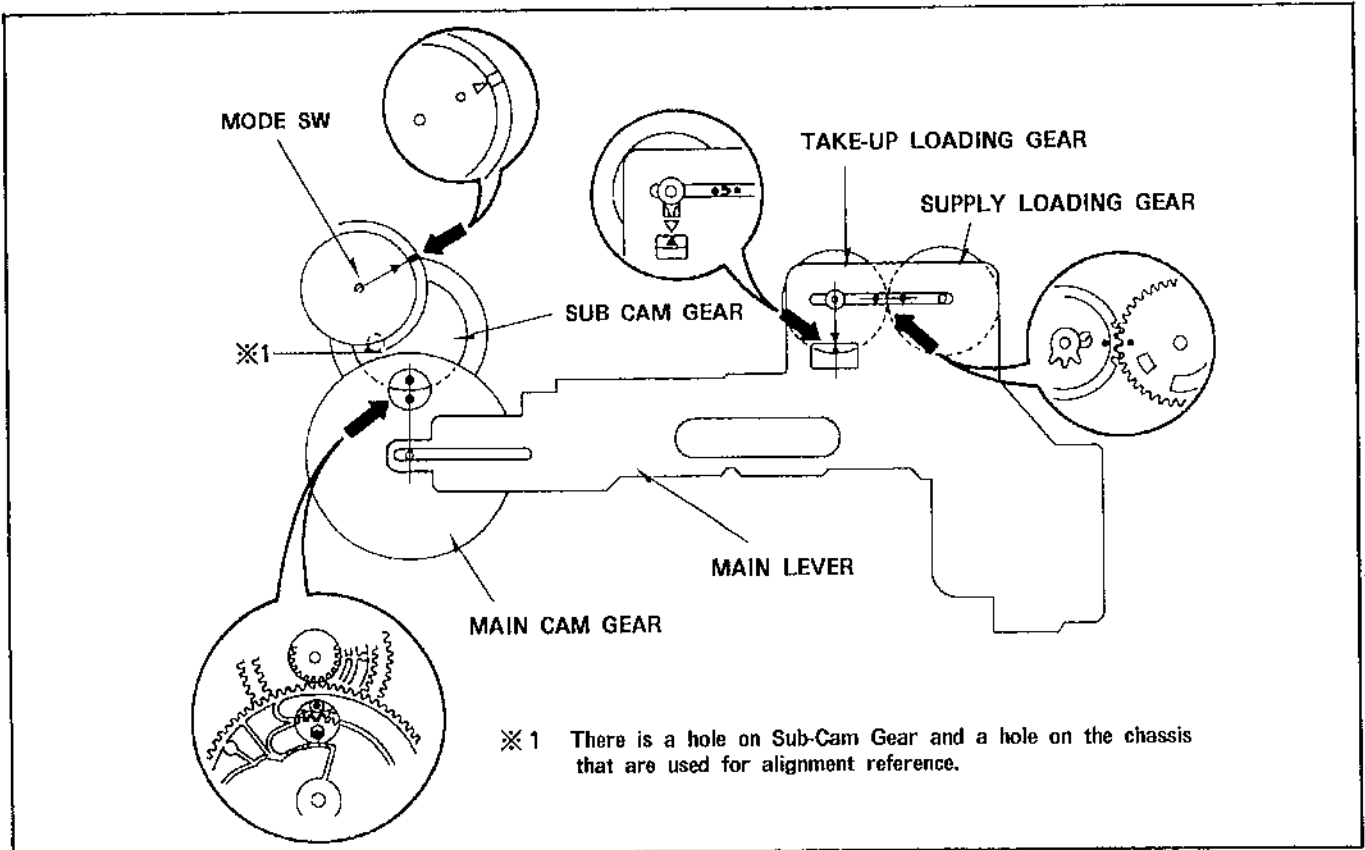


Fig.M34

4-2. Assembly of parts on the Top Chassis

1. Install the Pinch Cam Gear onto shaft (A) and the P5 Arm Unit onto shaft (B).
2. Install the P5 Stopper Base with the cut washer (D) and screw (C).
3. Install the P5 Stopper on the P5 Stopper Base with latch (E).

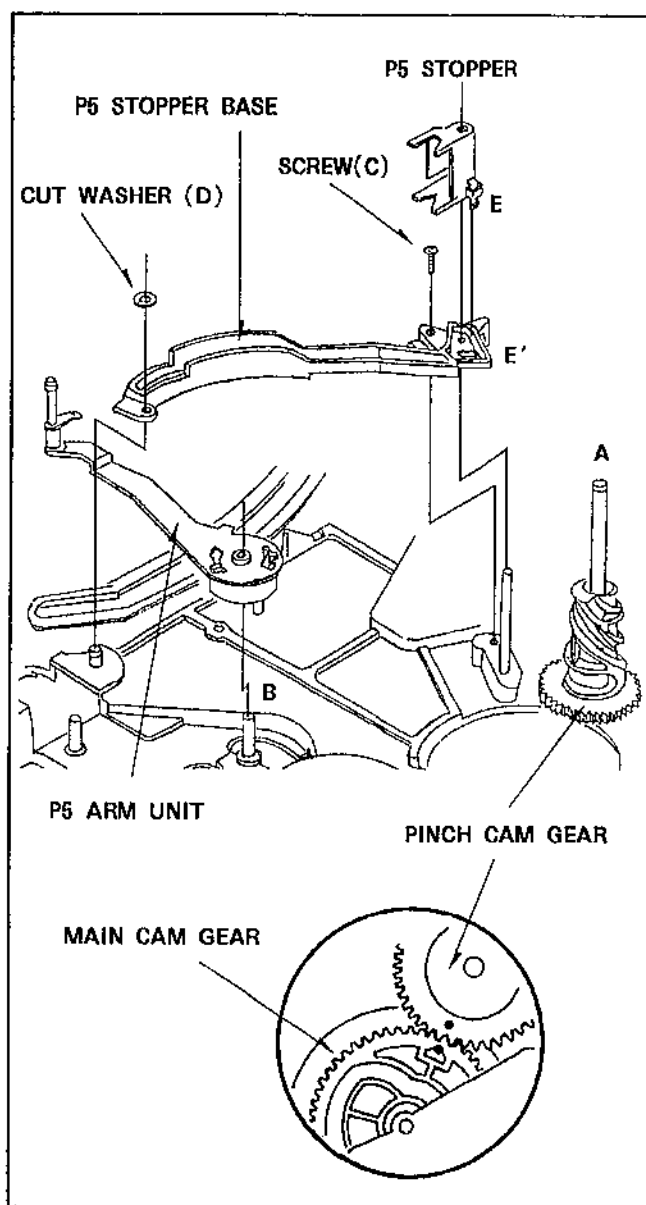


Fig.M35

4-3. Assembly of parts on the Bottom Chassis

1. Install the Idler Arm Unit onto shaft (F).
2. Install the Take-up and Supply Reel Gears onto shaft (G) and (H).
3. Install the Idler Regulator Level onto shaft (I) then install the Direct Lever.
4. Install the Center Clutch onto shaft (F) with the cut washer.

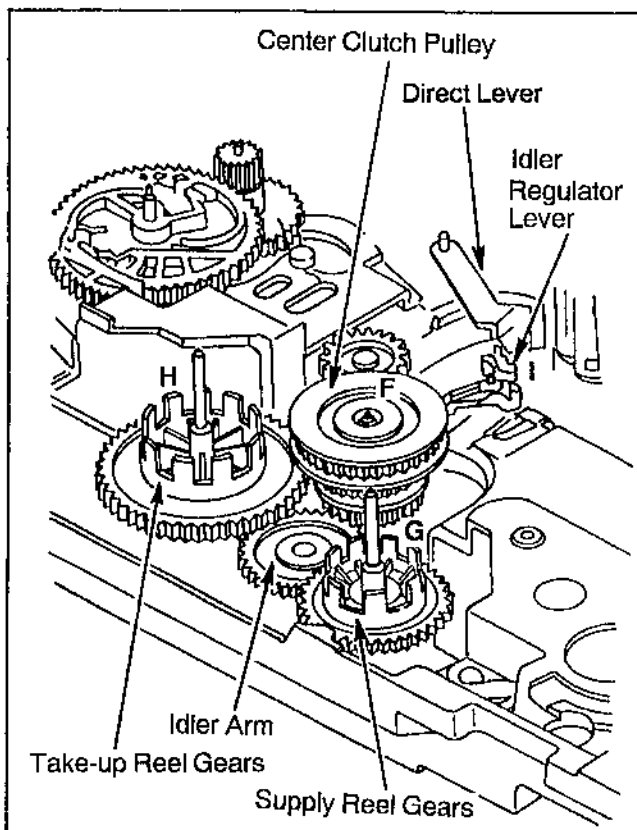


Fig.M36

4-4. Assembly of Main Cam Gear and Sub Cam Gear

1. Install the Sub Cam Gear on to shaft (J) so that the chassis hole aligns with hole in the Sub Cam Gear.
2. Rotate the Holder Connection Gear to position of arrow mark as shown in Fig.M37.
3. Install the Main Cam Gear onto shaft (K) so that the hole of the Main Cam Gear aligns with the hole in the Sub Cam Gear. Also insert the boss of the Take-up Tension Regulator Arm into the slot on the Main Cam Gear.

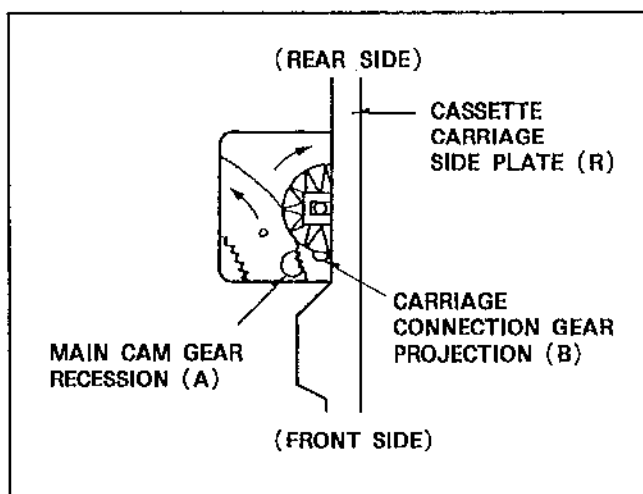


Fig.M37

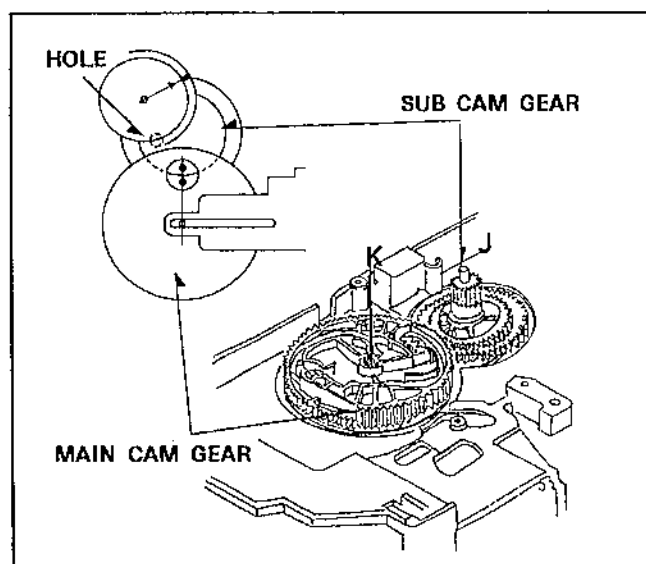


Fig.M38

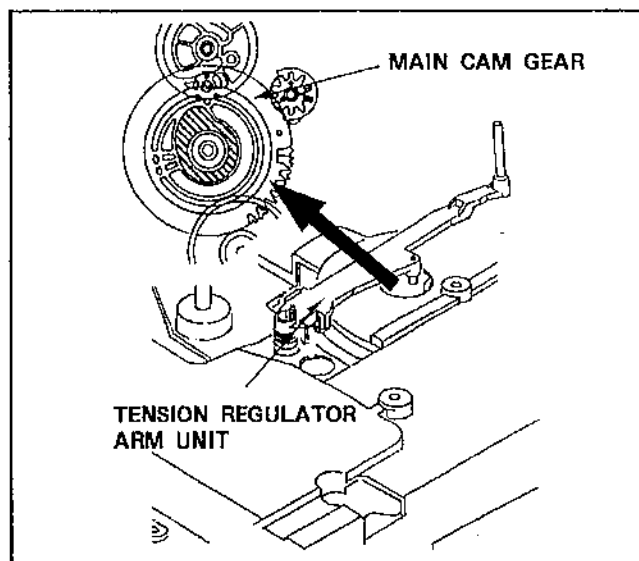


Fig.M39

4-5. Assembly of Mode Switch

1. Align a triangle mark on the Mode Switch Gear with the notch on the Mode Switch frame.
2. Confirm the Main and Sub Cam Gears aligned properly then install the Mode Switch with screw (L).

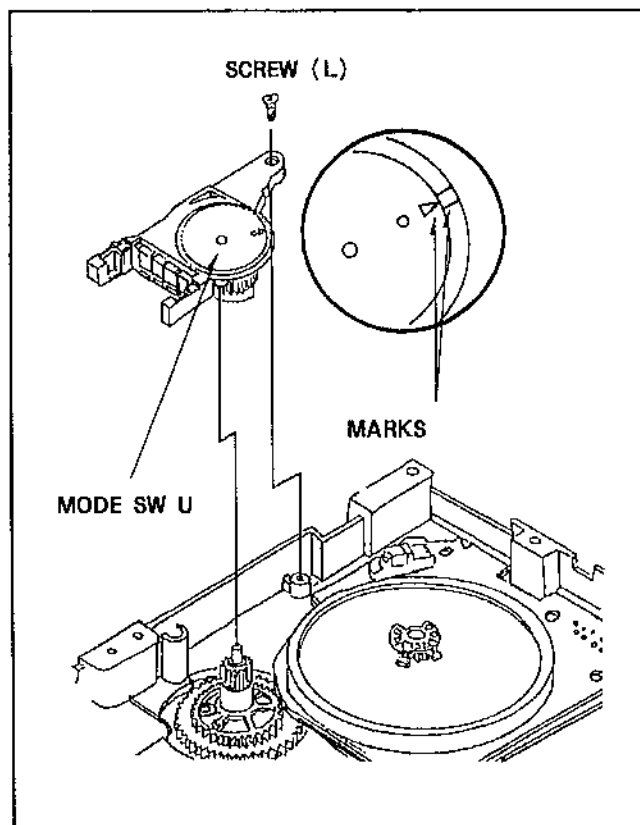


Fig.M40

4-6. Assembly of Take-up and Supply Loading Gears.

1. Install the Supply Loading Gear onto the shaft (S).
2. Install the Take-up Loading Gear onto the shaft (T) so that hole on the Take-up Loading Gear align with the hole on the Supply Loading Gear.
3. Install the Supply Loading Arm onto shaft of the Supply Inclined Base with washer.
4. Insert the Take-up Loading Arm onto shaft of the Take-up Inclined Base with washer.

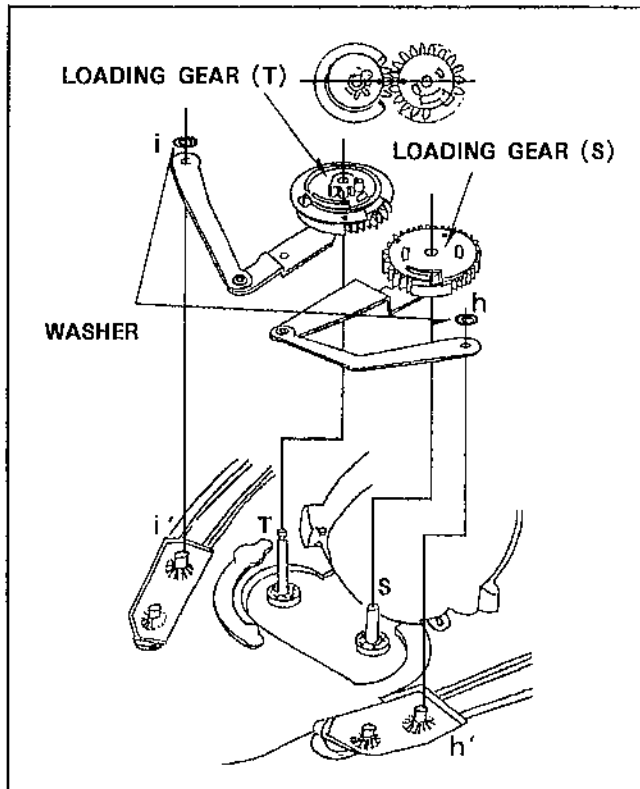


Fig.M41

4-7. Assembly of Main Lever

1. Install the Main Lever Arm checking that the boss of arms and shafts are in correct position and mark on the Main Lever Arm is aligned with mark on the Take-up Loading Gear.
2. Insert the 2 cut washer as shown in Fig.M42.

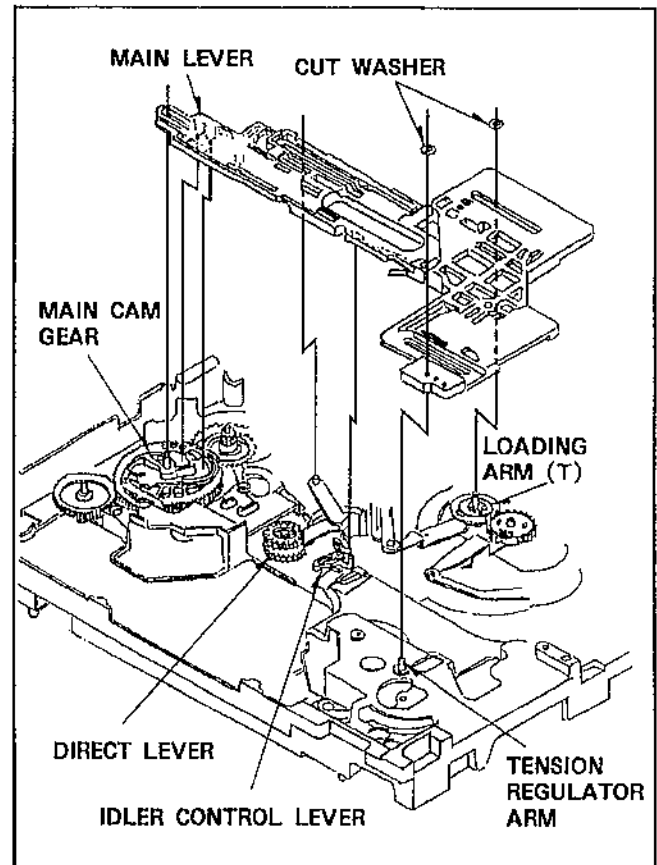


Fig.M42

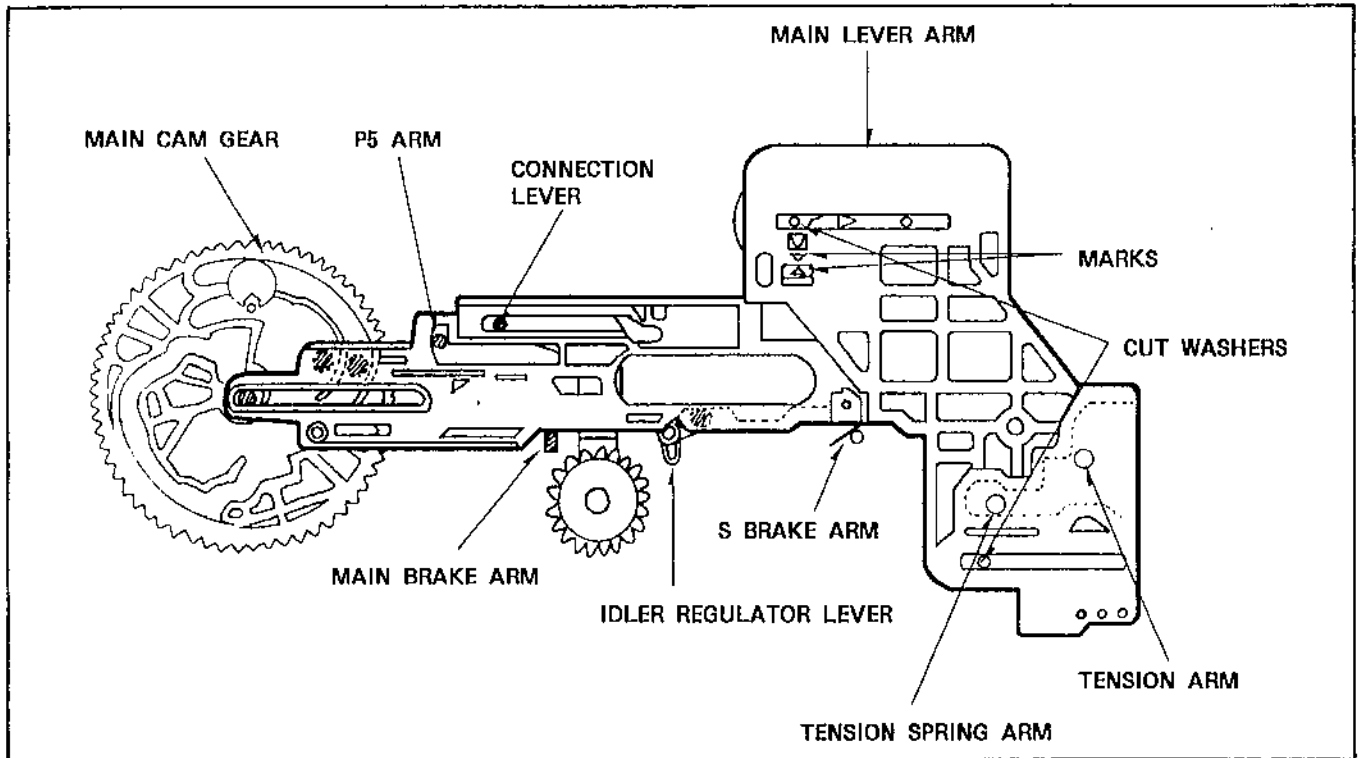


Fig.M43

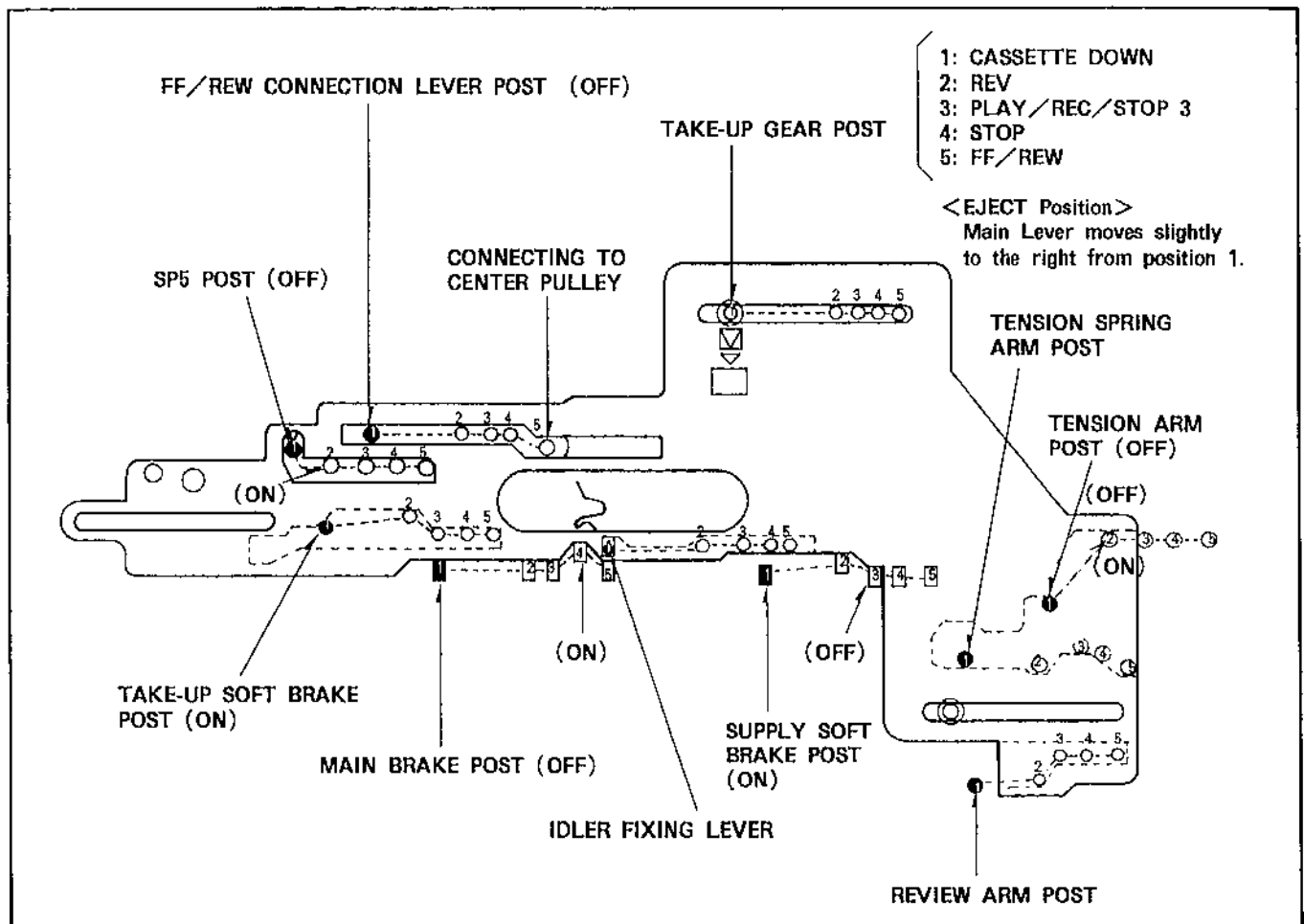


Fig.M44

4-8. Reinstall of the Cassette Compartment

1. Push the locking tabs to direction as shown in Fig.M45 and remove the Top Plate.

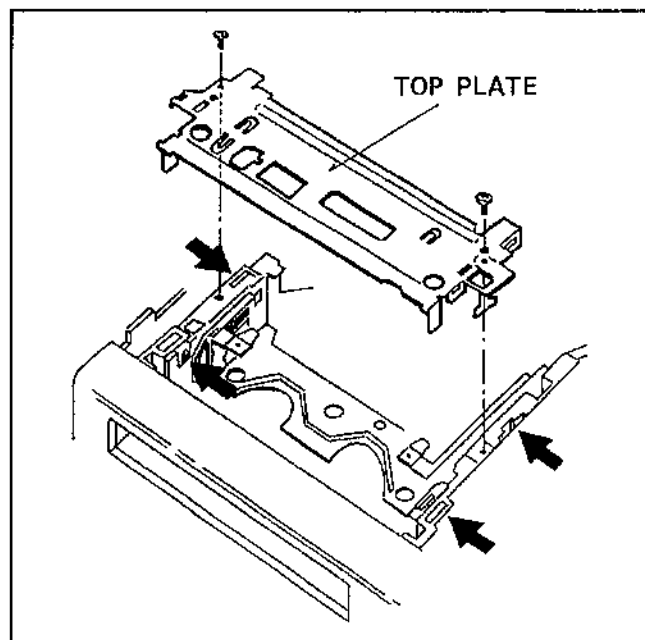


Fig.M45

2. Lift up the Cassette Holder Unit as shown in Fig.M46.

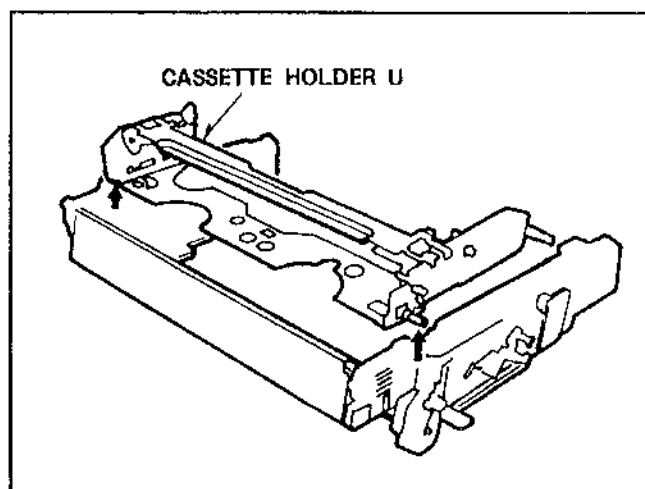


Fig.M46

3. Press the Wiper Arm to direction indicated by arrow mark so that the Wiper Arm comes to cassette down position completely as shown in Fig.M48. Confirm a triangle mark on the Wiper Arm aligns with the mark on the Rack (B) Unit.

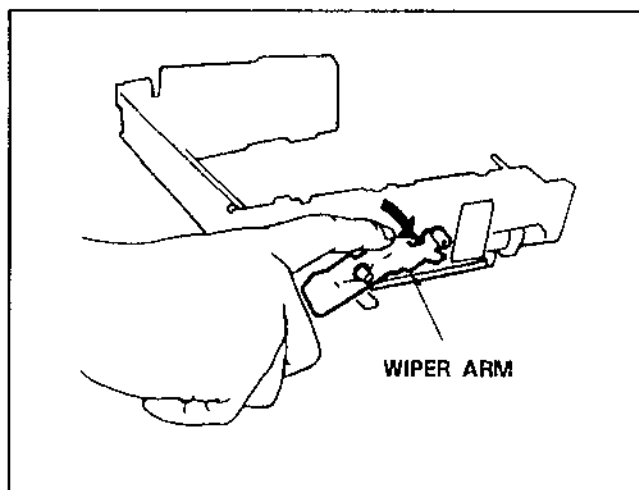


Fig.M47

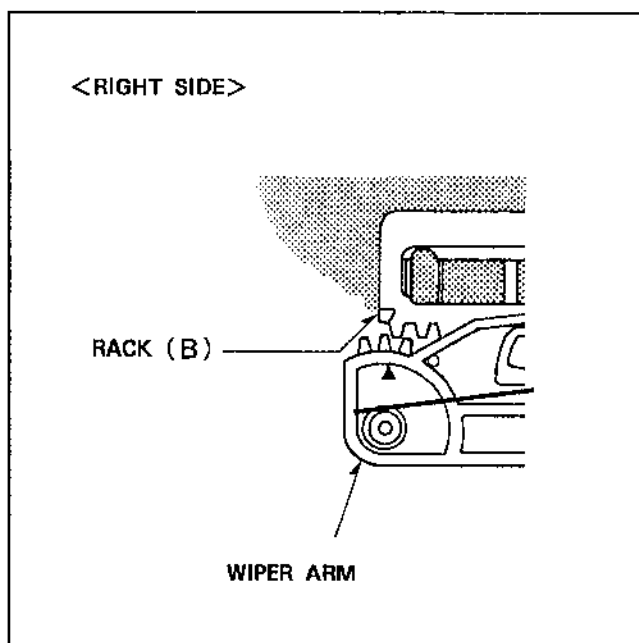


Fig.M48

4. Install the cassette compartment (without cassette holder) to the mechanical chassis so that mark on the Holder Connection Gear should line up with first tooth of the Rack Gear as shown in Fig.M49.

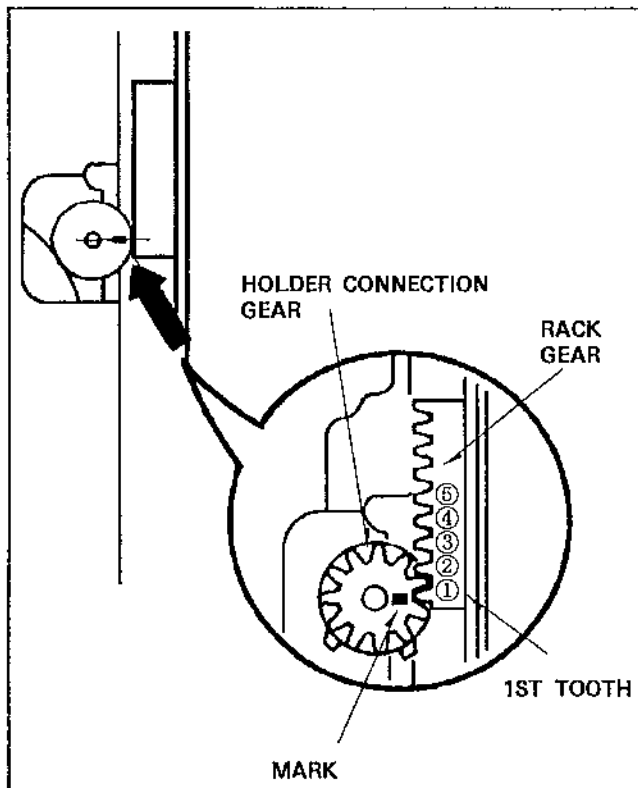


Fig.M49

5. Tighten 4 screws as shown in Fig.M50.
6. Manually move the loading mechanism toward the EJECT position by turn the Loading Motor and stop just before completion, so that the Wiper Arm straight up.
7. Install the Cassette Holder Unit in the Cassette Compartment Base as shown in Fig.M51.
8. Install the Top Plate on the Cassette Compartment Base.
9. Manually confirm that front loading and main loading run smoothly.

<NOTE>

For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Fig.M52.

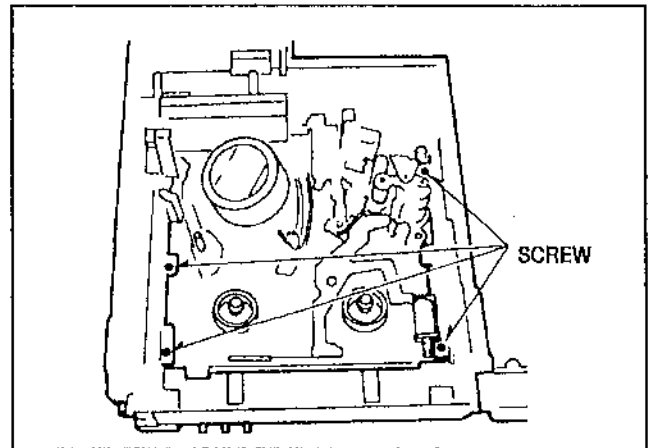


Fig.M50

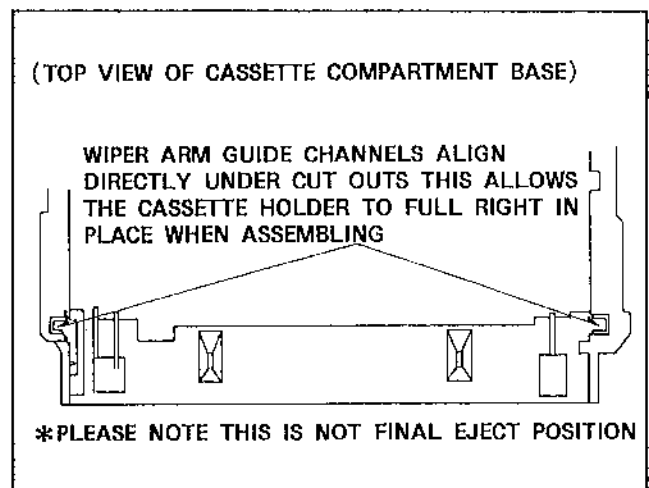


Fig.M51

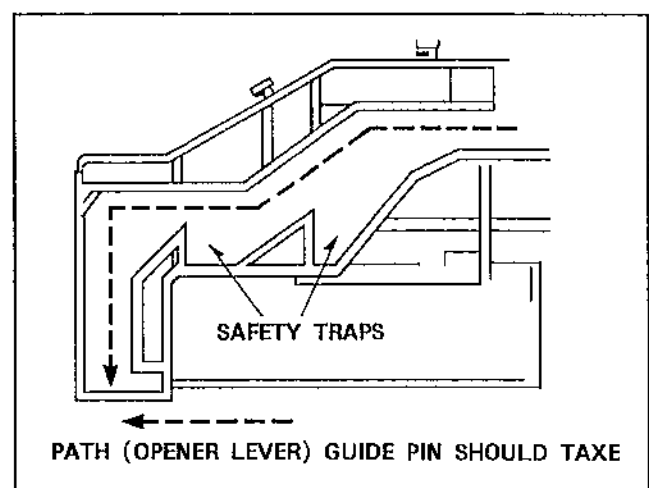


Fig.M52